



International Conference on European Integration 2020

ICEI 2020

Proceedings
of the 5th International Conference
on European Integration 2020

December 3 – 4, 2020
Ostrava, Czech Republic



Collection



VŠB - Technical University of Ostrava

Faculty of Economics

Department of European Integration

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Foreword

Dear readers,

First and foremost, I am glad that the International Conference on European Integration is taking place this year, and I would like to thank the organizers who managed to adapt to these unprecedented times.

Just a couple of months after the new College of Commissioners, under the leadership of Ursula von der Leyen, commenced its work, the whole world was forced to literally "go home" and shut down, in order to save lives. The media quickly shifted its attention to the topic of last months and there was no way of escaping it.

The Covid-19 pandemics was everywhere. It exposed our vulnerabilities, but also our strong points. We saw Member States closing their borders and struggling to get the protective equipment, but we also witnessed true European solidarity and human ingenuity. The Czech scientists who, with the help of European funds, developed professional models of protective mask or new testing methodology. German, Polish and Romanian doctors flying to Italy with equipment and staff to help in the severely affected local communities. This crisis gave the word "solidarity" a very tangible meaning.

Unfortunately, we are not out of the woods, yet. In order to prevent the European economy from falling into a deep recession, European leaders met to discuss a plan that will provide us with the right tools for the future. It took five long days, but the 27 EU leaders agreed on the Next Generation EU budget with the Recovery and Resilience Facility at the heart of the deal. In total €1.82 trillion will be deployed to, among other things, help the EU to cope with the impact of Covid-19 pandemics, to fight climate change and to prepare Europe for green and digital transition.

The European Commission, under the leadership of Ursula von der Leyen, was put to a hard test at the very beginning of its mandate. The first female president and her team of Commissioners has set out an ambitious political agenda for the European future – with the green and digital transition at the hearth of the policy making.

I am deeply convinced that we can continue improving the EU and its governance only through open and democratic debate. I therefore firmly believe that this year's conference will be a place for fruitful discussion and that it will provide us with further inspiration for our common European project.



Dana Kovaříková

Head of the European
Commission Representation in
the Czech Republic

Foreword

Ladies and gentlemen, dear readers, dear ICEI friends,

The fifth year of the International Conference on European Integration 2020 (ICEI 2020) is being held at a completely different time than the previous one. 2020 is the year of ending the Europe 2020 Strategy and we are looking back on the past decade of meeting the goals of smart, sustainable and inclusive Europe. It is also the first year of the new European Commission's agenda under the leadership of Ursula von der Leyen and last but not least, especially the year of a completely unprecedented crisis caused by a new type of coronavirus in the COVID-19 pandemic.

The COVID-19 presents three shocks in one: a public health crisis, a hammer-blow to the real economy and a stress test for the global financial system. It is also the hardest test for the essence and values of European integration and the European Union. One of the results of this test was the re-demonstration of mutual solidarity and cohesion, which resulted in the approval of the EU-27 Multiannual Financial Framework for the 2021–2027 period and the creation of a common and comprehensive investment response by the EU Member States in the form of the Next Generation EU recovery plan which includes a package of programs, initiatives and facilities in an unprecedented total amount of € 2,364 billion.

With the hope of overcoming the crisis quickly, we are looking forward to the future of the European Union, to eliminate the effects of the spread of this insidious coronavirus as much as possible. However, some damages are already irreparable this year. These also include impact on the organisation of ICEI 2020.

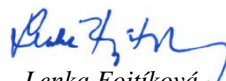
With a heavy heart, we leave the traditional offline mode of the conference. ICEI 2020 is taking place in an online environment without personal contact with you, our participants. We strongly believe that currently, it is the best possible and compromise solution for all of us. However, the added value of the ICEI conference remains conference proceedings, as a traditional, tangible and proud output from the fifth year of the International Conference on European Integration 2020.

Wishing you an inspiring experience.



Lukáš Melecký

Head of Department of European Integration
Faculty of Economics
VŠB – TU Ostrava



Lenka Fojtíková

Conference Guarantee
Faculty of Economics
VŠB – TU Ostrava

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Analysis of Performance Efficiency of Legal Entities of Public Law and Non-Profit Legal Entities Under the Central and Local Government Bodies: in Terms of the Transformation of Georgia with the EU

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Abstract

The work deals with the effectiveness of the function of LEPL-s and non-profit (non-commercial) legal entities under the central and local government bodies, the legislative basis of their management, the existing reality, the practical aspects of management compared to the advanced EU practice. The aim of the authors is to identify the factors acting on the efficiency of LEPL_s and non-profit (non-commercial) legal entities to identify problems and ways of solving them and to develop recommendations. During the research process, for the purpose of formulating an in-depth analysis of the issues, for presenting the deficiencies of the public governance system, for formulating conclusions and recommendations, it was analyzed EU-Georgian official political and legal documents, literature, Internet sources which have high degree of credibility.

Keywords: budget, efficiency, EU, Georgia, governance, public administration

JEL Classification: H83, L31, L32, O20, O21, O38, P11, P21

1. Introduction

The number of LEPLs and non-profit (non-commercial) legal entities in Georgia increases sharply from year to year. These organizations control their activities independently on political, state, social, educational, cultural and other fields with the funds allocated from the state or municipal budgets. First off all, they are focused on non-commercial activities but the law allows them to carry out additional entrepreneurial activities. It is interesting to see how efficiently they spend budgetary funds, how effective is their funding process salary and personnel policy is and what is their cost structure is. In the article we will talk about the above mentioned issues.

One of the most problematic places is program budget result evaluation indicators are of a general character and do not allow to make effective result evaluation.

The work aims to analyze the performance efficiency of Legal Entities of Public Law (hereinafter referred to as "LEPL") and non-profit (non-commercial) legal entities in both theoretical and practical direction, to review the experience of implementing appropriate methods in a particular state, risks and advantages.

Non-governmental non-profit organizations are those, which are not established by the government, are not dependent on the state, and are founded for generally beneficial activity or non-profit activity for private benefit. Non-profit non-governmental organizations are also

some public entities that were co-founded by regional autonomous governments, which, in the Czech environment, including regions, municipalities or autonomous parts of municipalities (Skarabelova, 2005).

The study of the existing literature about the development of the territorial units as a result is considered that they address the peculiarities and problems associated with the use of the budget policy were mainly considered in the context of accelerating economic activity (Abuselidze, 2018; Abuselidze, 2019; Kline & Moretti, 2014; Anheier, 2014; Gottlieb & Glaeser, 2008; Janssen, 2011; Busso, Gregory & Kline, 2013; Gottlichova & Soukalova, 2015; Ehrlich & Seidel, 2018; Rekhviashvili, 2018; Shamugia, 2018).

2. Problem Formulation and Methodology

Because of that Georgia wants to be a plenary member of European Union, during the association process special importance is given to efficiency of public finance management. Especially important is the problems connected with the functionality of LEPL-s and non-profit non-governmental organizations.

Consequently, it is very important to analyse the formation and functionality of these types of organizations, state budget financing system efficiency, staff policy, labour reimbursement system, process of accountability and cost structure. These are the prerequisites for effective governance in the public sector which ensure the increase in effectiveness of the functionality of state and municipal LEPL-s and non-profit non-governmental organizations, also it promotes to identification the achievements and shortcomings in the process of activity, to implement necessary changes, which finally supports to improve the results of programs and subprograms.

2.1 Research Methodology

This research is based on the methods (quantitative qualitative, statistical, synthetic, component and comparative analysis) and practical approaches, which are in practice and generalized in the Georgian and foreign economic writings and specially touch on the matters of efficiency of Legal Entities of Public Law and non-profit (non-commercial) legal entities. Informational background of this research includes legislative and normative acts adopted by the government of Georgia in the modern day, in particular: the National Statistics Office of Georgia, the Economic Development and Finance Ministries, the Georgian National Statistics Office, the Parliamentary Finance and Budget Committee and other related departments.

2.2 Effectiveness of Financing Programs of Legal Entities of Public Law and Non-Entrepreneurial (Non-Commercial) Legal Entities

Program Budgeting aims at planning budgets taking into consideration the results achieved, assessment of achieved results in case of the results are different, implementation of relevant changes and identification of the causes.

According to the financial management and control instructions, the budget should be prepared in accordance with managers of LEPL and economic departments of the ministries. At the same time, the people supervising the LEPL are directly responsible for the implementation of the programs, the achieving goals and results, and the management and coordination of the processes.

However, according to the research carried out by the Audit Office (State Audit Office of Georgia [online], 2019), in the process of preparing a mid-term action plan, the LEPLs have more communication with the economic departments of ministries. People supervising the LEPLs are involved in the work process several days before the documents are approved. It

means that the information about assessment indicators and expected results is provided not to supervisors, but to economic departments of ministries, but economic departments are not obliged to know more about the specificity of the LEPLs in order to adequately assess the LEPL goals, achievement results and measures to be taken.

According to the program budget methodology, the results of programs / sub-programs should be determined clearly and concretely, and performance indicators should be concrete, measurable, achievable, relevant and time-consuming. Also, it is desirable to present a qualitative indicator along with a quantitative indicator to fully assess the achieved results.

We think that benefit should be measured by the cost efficiency ratio (CER) that might determine the effectiveness of the investments made by the government (Abuselidze, et al., 2019). For the purpose of spending (Abuselidze, et al., 2018) product funds effectively, it is reasonable to change the funding model.

With the survey conducted by the audit group, there are analyzed the mid-term action plan (2017-2020) of LEPLs under the Ministry of Education, Culture and Sport. The "LEPL National Center for Educational Quality Enhancement" does not present any qualitative indicator in the mid-term action plan, most quantitative indicators are not suitable with the SMART criteria defined by the budget methodology.

There are more flaws in the mid-term action plan presented by "LEPL - National Center for Teacher Professional Development". The LEPL had a total of 13 sub-programs in 2017, but only for 5 sub-programs were presented expected results and assess indicators. The fact that the results and indicators of the achievement are not made with appropriate quality it hinders the assessment process of the results achieved by LEPL.

According to the Financial Management and Control Instruction, the activities of LEPLs shall be monitored by mechanisms such as monthly, quarterly and annual reporting's. However, in many cases the mechanisms of reporting between the Ministry and its subordinate liabilities are set up only with a mid-term action plan, quarterly and annual report of the budget implementation.

Quarterly performance report cannot be the effective mechanism for evaluating the efficiency of LEPL's activities by the Ministries. As far as the ministries are informed only about implemented activities by LEPLs. It is not possible from the abovementioned information that the ministries determine whether the specific LEPL has implemented all the events planned for this period.

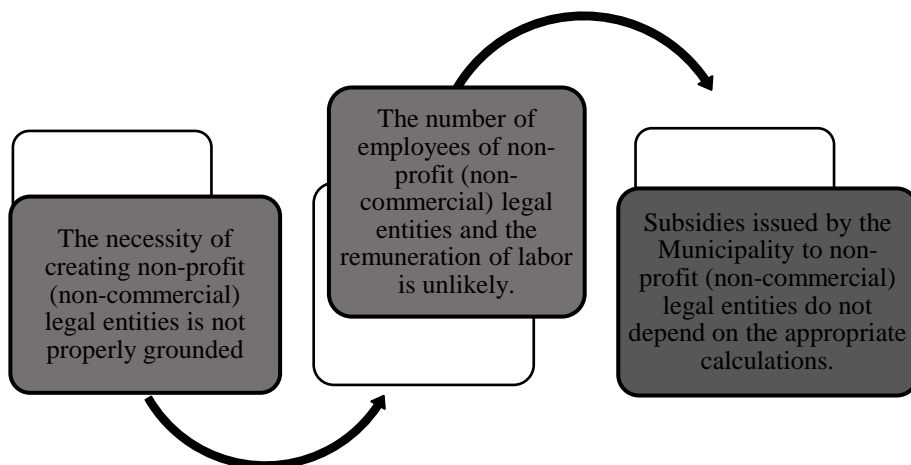
2.3 Efficiency of Financing Legal Entities of Public Law and Non-Profit (Non-Commercial) Legal Entities Under the Central and Local Government Bodies

Legal entities of public law (hereinafter referred to as "LEPL") are organizations which have more independence than other governmental institutions and may act with commercial rules.

Non-entrepreneurial (non-profit) entity is an organized entity designed to achieve the specific goal, this type of organisations are focused on non-profit activities. The main source of income for these organizations is budgetary resources, although legislation allows them to get additional income by entrepreneurial activities.

Municipalities can establish non-profit (non-commercial) legal entities for better coordination of their activities. Which should be oriented on the tasks of the municipality and the fulfillment of the set goals (Fig.1).

Figure 1: Systemic Shortcomings Identified in the Creation and Management Process of Non-Profit (Non-Commercial) Legal Entities



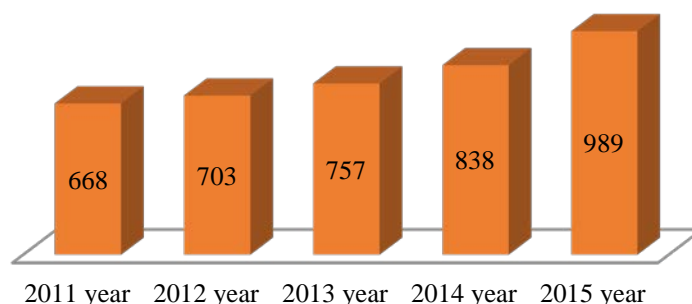
Source: drawn up by the authors, based on audit surveys.

Due to the scale of the problem, throughout the country, the process of establishing and funding legal entities in municipalities has been studied.

According to the data of the State Audit Office, up to 989 non-profit (non-commercial) legal entities were functioning in municipalities by 2015. Quantitatively most (35%) non-profit (non-commercial) legal entities were functioning in the field of culture and education, sport-18%, infrastructure -15%, gardens -10%.

In 2011-2015 the number of municipal non-profit (non-commercial) legal entities increased sharply, the rate of growth was 5% to 16% (Fig. 2).

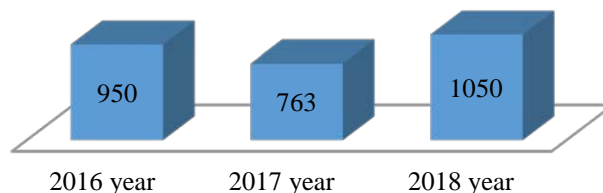
Figure 2: Number of Non-Profit (Non-Commercial) Legal Entities Owned by the Municipality in 2011-2015



Source: author's calculations are based on surveys of the State Audit Office of Georgia (2019).

By 2016, the number of non-profit (non-commercial) legal entities owned by the municipalities reached 950. By 2017 their number reduced to 763, according to the data of 2018, a total of 1050 non-profit (non-commercial) legal entities are operating in municipalities (Fig.3).

Figure 3: Number Non-Profit (Non-Commercial) Legal Entities Owned by the Municipality in 2016-2018



Source: author's calculations are based on surveys of the State Audit Office of Georgia (2019).

Due to the fact that a significant amount of money is spent from the budget for the establishment and functioning of non-profit (non-commercial) legal entities, it is necessary to reasonably thoroughly prove their need for creation. Based on the audit conclusion, it is clear that in the majority of cases the establishment of such organizations is not responding to the main criterion - the necessity of establishing.

- In the municipalities non-profit (non-commercial) legal entities are created and their number increases sharply from year to year. Whereas there are already structural units which fulfill the relevant tasks within the scope of their competence. For example, in municipalities there are operating non-profit (non-commercial) legal entity "Public Relations and International Contacts Center", "Tourism Development Centers" and others.
- Municipalities are creating non-profit (non-commercial) legal entities whose functions and responsibilities coincide with the existing non-profit (non-commercial) legal entities based on the objectives of the work. For example, in the field of art, culture or sports alongside existing non-profit (non-commercial) legal entities, there is non-profit (non-commercial) legal entity "Esthetic Training Center" and others.
- In the municipalities there are created non-profit (non-commercial) legal entities, the need for which is not properly grounded. At the same time, the purpose of which they function is not the main activity of the municipality.

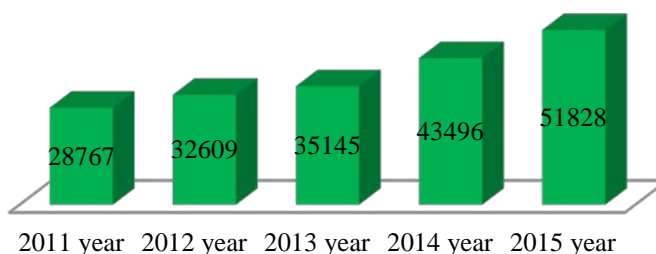
This indicates the fact that the decision of creating of non-profit (non-commercial) legal entities does not conform to the municipality's goal of improving municipality activities and the quality of provided public services.

In general, the increase in effectiveness of the activities of the non-profit (non-commercial) legal entities is largely determined by the optimally staffed and competent worker. The number of employees should be relevant to the goals and scale of the organization. Hence, the increase in the number of employees must be connected to additional benefits or the improvement of service quality.

In 2011-2015, the number of employees of the above mentioned organizations and the amount of compensation paid for them is increased in parallel of increasing the number of non-profit (non-commercial) legal entities.

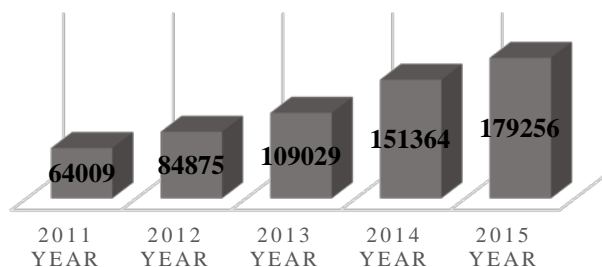
The increase rate in the number of employees varies from 8% to 24% in comparison to the previous year, while the increase rate in labor compensation varies from 18% to 39% (Fig. 4-5).

Figure 4: Number of Employees in Municipal Non-Profit (Non-Commercial) Legal Entities in 2011-2015



Source: author's calculations are based on surveys of the State Audit Office of Georgia.

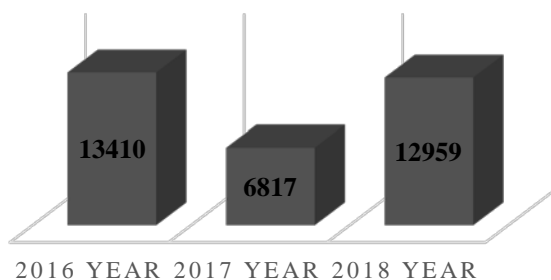
Figure 5: Employees' Salaries in Municipal Non-Profit (Non-Commercial) Legal Entities in 2011-2015 (Thousand GEL)



Source: author's calculations are based on surveys of the State Audit Office of Georgia.

In 2016-2018, the information about the number of municipal non-profit (non-commercial) legal entities and numbers of employees was provided by only 75 municipalities from 84. Based on the existing information, the number of employees in the last three years is defined so (Fig. 6).

Figure 6: Number of Employees in Municipal Non-Profit (Non-Commercial) Legal Entities in 2016-2018



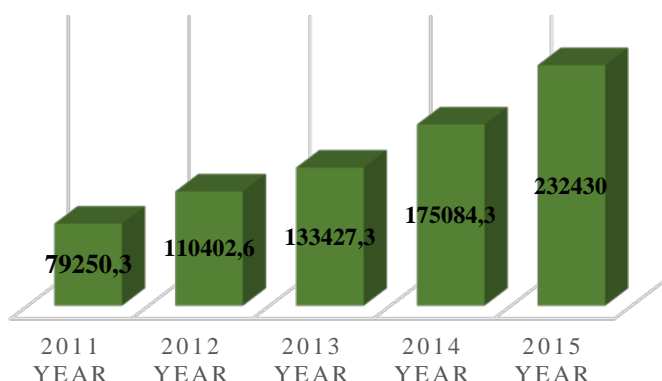
Source: author's calculations are based on surveys of the State Audit Office of Georgia.

It can be said that the number of employees of municipal non-profit (non-commercial) legal entities is unreasonably increasing. The reason is the deficiencies in human resources management. In particular,

- There are problems in the process of division functions and duties. Therefore functions and duties of employees' are doubled.
- Municipal non-profit (non-commercial) legal entities have significantly increased the number of employees in recent years. Without proving the growth reason.

Subsidies allocated from the municipal budget are the main source of funding of Municipal non-profit (non-commercial) legal entities. In 2011-2015, the growth rate of subsidies issued by municipalities varies between 21% to 40%) from year to year (Fig 7).

Figure 7: Subsidies Issued by Municipality in 2011-2015



Source: author's calculations are based on surveys of the State Audit Office of Georgia (2019).

When issuing subsidies, municipalities should be able to determine the expected outcomes and needs of the program, then the municipalities will be able to assess and control the activity of non-profit (non-commercial) legal entities.

According to the audit conclusion, the following deficiencies are identified in the process of determining the quantity of subsidies provided by the municipalities on non-profit (non-commercial) legal entities. In particular,

- Subsidies are issued by the municipality on non-profit (non-commercial) legal entities without proper calculation. So that they do not determine how much money is needed on different programs and what their expected results are.
- While issuing subsidies the quality of services is remaining beyond the control, Because the municipalities do not possess the appropriate mechanisms for analysis of conformity between the money spent by non-profit (non-commercial) legal entities and the obtained results.

According to the Local Program Budget of Kobuleti Municipality 2019, the amount of expenditures provided non-profit (non-commercial) legal entities is 8 512 525 GEL. These funds are distributed to 12 non-profit (non-commercial) legal entities (Table 1-2).

Table 1: Total Expenditure of 12 Non-Profit (Non-Commercial) Legal Entities in Kobuleti Municipality, the Share of Administrative Expenses According to the 2018 Budget (in GEL)

Non-profit (Non-commercial) legal entities	Salary	Goods and Services	Total expenditure	Share of administrative expenses
Unite of Kobuleti kindergartens	1 886 807	1 149 897	3 041 785	99,83%
Kobuleti complex sport school	143 600	18 063	197 941	81,67%
Kobuleti Culture Center	441 288	49 136	490 424	89,98%
Kobuleti Art School	481 630	15 184	497 014	99,96%
Sports club - Kobuleti	12 354	6 505	18 859	100%
Cleanup of Kobuleti	1 356 369	576 575	1 993 346	96,97%
Kobuleti greenery	168 676	79 835	248 511	100%
Kobuleti village water	300 960	277 873	580 233	99,76%
Kobuleti Park	151 391	104 089	255 480	100%
Song and Dance Ensemble "Mkhedruli"	181 920	4 668	186 588	100%
Kobuleti Museum	51 640	22 209	73 849	100%
Health and Social Services Center	24 705	225 387	250 092	100%

Source: author's calculations are based on Legislative Herald of Georgia (2019a).

According to the actual figure of 2018, administrative expenses amount to 7 730 761 GEL is approximately 98.61% of the total expenditures of non-profit (non-commercial) legal entities.

According to the data of 2019, administrative expenses amount to 8 446 125 GEL is approximately 99.56% of the total expenditures. As the data shows, administrative expenses are characterized by the growth trend and their share of the total expenditure is higher than it is normal.

The share of Labor remuneration costs (including freelancers) for employees in non-profit (non-commercial) legal entities of Kobuleti municipality varies from 65% to 97% of the total expenditures.

The exception is only "Kobuleti village water" where the share of expenses incurred for employee payments is about 51.8% in 2018 and 52.2% in 2019.

After consideration of municipal non-profit (non-commercial) legal entities, it is desirable to note another acute problem that is equally observed in both state and municipal LEPs or non-profit (non-commercial) legal entities. The issue concerns the unsustainable growth of the number of freelancers.

Table 2: Total Expenditure of 12 Non-Profit (Non-Commercial) Legal Entities in Kobuleti Municipality, the Share of Administrative Expenses According to the 2019 Budget (in GEL)

Non-profit (Non-commercial) legal entities	Salary	Goods and Services	Total expenditure	Share of administrative expenses
Unite of Kobuleti kindergartens	2 247 120	1 199 680	3 452 800	99,82%
Kobuleti complex sport school	160 080	18 720	215 800	82,85%
Kobuleti Culture Center	502 200	53 100	555 300	90,44%
Kobuleti Art School	440 160	19 340	459 500	100%
Sports club - Kobuleti	15 600	7 400	23 000	100%
Cleanup of Kobuleti	1 449 300	570 625	2 019 925	100%
Kobuleti greenery	178 440	88 360	266 800	100%
Kobuleti village water	334 920	301 780	636 700	100%
Kobuleti Park	163 200	110 400	277 000	98,77%
Song and Dance Ensemble "Mkhedruli"	200 520	36 080	236 600	100%
Kobuleti Museum	57 240	21 160	78 400	100%
Health and Social Services Center	25 800	264 900	290 700	100%

Source: author's calculations are based on Legislative Herald of Georgia (2019b).

According to the report of the Ministry of Finance, 38 470 people are registered as freelancers in the State LEPLs and non-profit (non-commercial) legal entities. Totally 283 thousand people are employed in the public service by 2017, which is 7.6% of the country's population.

According to the Economic Co-operation and Development Origination (OECD, 2017) in Japan where the population is 127 million people, only 3.9 million people are employed in the public sector, which is Approximately 3% of the country's population. Unlike foreign states, there is no law in Georgia to control the duration of recruiting freelancers. In France, an employee may be employed as freelance for a maximum of 18 months, after the expiry of this period, he or she shall be sent to the state or dismissed from the job. The timeframe for Israel is defined for 9 months, in case of Georgia, the deadline is unlimited.

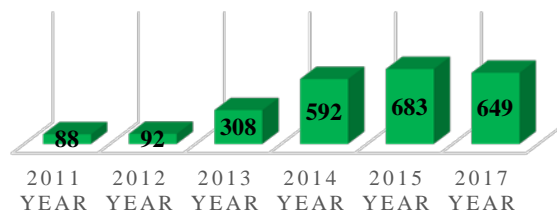
According to the survey conducted by IDFI (Institute for Development freedom of Information [online], 2018):

- By the year 2012, in 40 LEPLs and non-profit (non-commercial) legal entities there were 8 870 employees, by the year 2017 the number increased to 12 632 employee.
- By the year 2012, in 38 LEPLs and non-profit (non-commercial) legal entities there were 1077 people employed as freelancers. By the year 2017, in 67 LEPLs and non-

profit (non-commercial) legal entities this figure was determined by 7 193 freelancers.

- In 2012, employees of 45 LEPLs and non-profit (non-commercial) legal entities got 77 million GEL as a salary, by the year 2016 this figure was determined by 165 million GEL in 72 LEPLs and non-profit (non-commercial) legal entities.
- In 2012, freelancers of 39 LEPLs and non-profit (non-commercial) legal entities got 29.5 million GEL as a salary, by the year 2016 this figure was determined by 51 million GEL in 62 LEPLs and non-profit (non-commercial) legal entities (Fig.8).

Figure 8: Number of Freelancers in 27 LEPLs and Non-Profit (Non-Commercial) Legal Entities Subordinated of 8 Self-Governing Units



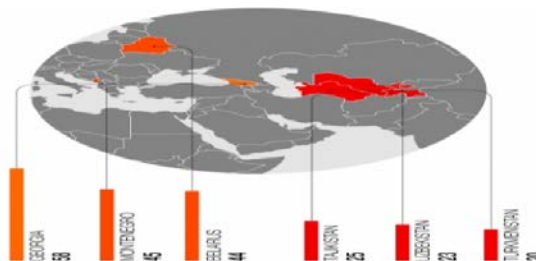
Source: Transparency International Georgia

The increase in the number of freelance employees leads to the fact that their employment procedures is relatively simple. Which increases the risk of nepotism and political favourism.

Analysis of the CPI (Corruption Perceptions Index 2018) published by the Transparency International Georgia is based on analyze the revenue and expenses, also the effectiveness of financing of state and municipal LEPLs and non-profit (non-commercial) legal entities.

According to the Corruption Perception Index published by the Transparency International Georgia, Georgia ranks 41th from 180 countries with 58 points. The index is based on experts' opinions about the level of corruption in the public sector (Fig.9).

Figure 9: Corruption Perceptions Index 2018



Source: Transparency International (2019).

As we see in the public sector the Corruption Perception Index is very high for Georgia. Which is one more reason why it is hard to control the revenue and expenses of state and municipal LEPLs and non-profit (non-commercial) legal entities.

In conclusion, we can note that even though the LEPLs and non-profit (non-commercial) legal entities could be created for significant public purposes, in case of absence of appropriate control mechanisms, they could easily become a source of irrational spending of budget funds.

3. Conclusion

During the review of peculiarities of financing of LEPL programs, the gaps were identified, mostly related to the reporting process.

In the process of working on medium-term action plan, LEPLs have mostly communication with the economic or financial department of the Ministries. The supervisors are only formally involved in the process. Because of this problem, the results of the programs and the assessment indicators can not be established as effective tool for evaluating efficiency of LEPLs' activity.

In order to solve this problem it is necessary that the Ministry of Finance properly dictate supervisors' roles and responsibilities at each stage of the mid-term action plan.

Assessment indicators presented by LEPLs in the mid-term action plan, the achieved results can not satisfy the budget methodology requirements. Also in the workshops organized by the Ministry of Finance, should participate LEPL supervisors and high or medium managers should participate.

The Ministry of Finance should provide training and workshops for high or medium managers, supervisors of LEPLs / Sector Ministries. Also, the sectoral ministries should ensure their systematic involvement in these activities.

Sectoral ministries do not require information about the planned activities with reference to the timeline from the persons supervising the LEPL.

As a result, it is impossible to assign status for performance according to specified periods (monthly or quarterly). To ensure periodical monitoring by the ministries, the Ministry of Finance is required to elaborate the relevant forms of periodical reporting. As a result, sectoral ministries will be able to compare factual results to the planned ones and make appropriate conclusions.

When submitting reports of performance by the LEPLs, the supervisors don't make any feedback. As a result, the sector ministries find it difficult to identify the deficiencies in the LEPLs' activities and to set the ways to improve it.

In this case the Ministry of Finance should develop a review and feedback mechanism for the reports submitted by the LEPLs to the supervisors, in order to make timely response to identified gaps and to set up adequate ways to solve problems.

In the municipality there are created non-profit (non-commercial) legal entities whose functions and responsibilities coincide with the existing non-profit (non-commercial) legal entities, pursuant to the objectives of the work. In addition, subsidies by the municipality to non-profit (non-commercial) legal entities are issued without proper calculations. Also municipalities do not possess appropriate mechanisms for analyzing conformity between the expenses incurred by non-profit (non-commercial) legal entities and the results obtained.

In the state or municipal LEPLs and non-profit (non-commercial) legal entities number of freelancers and the cost of remuneration paid as wages are increased from year to year.

The problem connected with high level of share of freelancers should be solved. It is desirable to define a specific marginal period of work as freelancers like in foreign countries.

The limitation determined by the law of Georgia of "Remuneration in Public Services" about maximum number of freelancers should be strictly controlled.

Corruption in Georgia is an acute problem in local self-government bodies. The inefficiency of functioning of LEPLs and non-profit (non-commercial) legal entities is based on a number of cases of corruption, but unlike the foreign countries the representatives of local self-government bodies are not yet members of the Anti-Corruption Council.

For financial management and cost effectiveness analysis of LEPLs and non-profit (non-commercial) legal entities similar to the practices of foreign countries, relevant agencies are required to publish full information about the number of LEPLs and non-profit (non-commercial) legal entities, also about the number of employees. At the same time the parliament, the audit office, the central and local authorities should control the efficiency of spending public finance by LEPLs and non-profit (non-commercial) legal entities.

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Industry 4.0. Challenges for European Industry Stemming from Digitalization: The Position of V4 Countries

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Abstract: *Industry 4.0 – a German concept of future industry development designed to cover both manufacturing and services through the digitalization of economic relations among businesses and between businesses and customers. We have observed how the EU industry and its growth have been shaped by a number of challenges and opportunities specific to different Member States. Therefore, the aim of the paper is to evaluate the readiness of the Visegrad countries to embrace a new digital age against the rest of the EU Member States. To this end we observed indices describing digital relations among collaborating companies, between companies and customers, as well as the activities of businesses in the computing cloud and the use of big data in comparison to the EU average. On the whole, the Visegrad countries (with the exception of Czechia) are below the EU average when it comes to the digitalization of service sectors while, in contrast to the rest of the EU economy, they are doing slightly better in traditional manufacturing industries, which account for a considerable part of the value added that they generate.*

Keywords: *digitalization, European Union, industry, services, Visegrad countries*

JEL Classification: *F61, L52, L78, L80*

1. Introduction

Since the beginning of the European integration, the EU industry has always faced many challenges and opportunities. Years following the financial crisis of 2008-2010 witnessed important changes in the structure of the European economy. First, many manufacturers shifted their economic activities towards servitisation, offering their goods in tandem with services (Ambroziak, 2017). Then, the next phenomenon, digitalization, emerged and widely spread around the world (Talar, 2018). The new digital era requires a new approach to workers' qualifications, customers' needs and expectations (Lee, et. al, 2020), new forms of collaboration among producers and industry-related service providers, as well as, suppliers and transport providers (Ha, 2020). They make a set of nets of bilateral and multilateral connections assisted by professional, scientific, technical, and administrative support services, often based on information and telecommunication technologies. It means that nowadays, digitalization is not a specific branch or sector of economy, but a concept of activities pursued by actors in the modern economy.

Taking into consideration both: the aforementioned digital challenges and opportunities and outcomes of the previous research on the trends observed in the V4 countries in intra EU trade in services and industrial goods (Ambroziak, 2018), the aim of the paper is to evaluate the readiness of the Visegrad countries to embrace a new digital age compared to other EU Member States. Inappropriate adaptation to new digital challenges in the industry and service

sectors may result in serious problems for the economic development of those countries in the face of the rapidly coming Industry 4.0 revolution.

2. Sectors and Data Under Research

In order to achieve the above mentioned research objective we decided to compute and analyse data concerning relative digitalization of selected sectors facing Industry 4.0. The process starts with the concept of the Internet of Things and remote monitoring, which ensure communication between goods and services (also those linked with industrial products) at various stages of manufacturing. A reverse flow of information takes place between machines engaged in the production and the production system of a company (Reischauer, 2018), while more advanced level of cooperation needs cloud computing (Wen and Zhou, 2016) and big data analysis (Opresnik and Taisch, 2015).

2.1. Selection and Classification of Sectors and Digital Business Activities

In order to answer the main question we decided to construct and then analyse a synthetic index. While constructing its Digital Economy and Society Index, the European Commission added relevant indicators on Europe's digital performance and now it keeps track of the evolution of digital competitiveness of the EU Member States. Firstly, it is a complex index, because it describes a level of connectivity (broadband infrastructure and its quality, as well as access to it), digital skills of society, scale and range of using the Internet services by citizens, quality of digital public services, research and development of ICT, as well as, the integration of digital technology by businesses. Secondly, it is based on arbitrary weighed shares of citizens, companies or public administration involved in digital activities.

In contrast to the Commission index, we decided to focus on only those sub-indices that are directly related to economic activities of companies operating in selected sectors. Therefore, our index is based on a group of companies in selected sectors, which are involved in digital revolution in the four spheres: internal and external processes integration, cloud computing, and using big data. In the first two areas we have calculated synthetic indices. The internal processes integration index is composed of equal data on companies which use enterprise resource planning (ERP) software package to share information between different functional areas, as well as, enterprises using software solutions, such as Customer Relationship Management (CRM). The external process integration index is based on two indices concerning firms which issue e-invoices, suitable for automated processing, as well as, companies whose business processes are automatically linked to those of their suppliers and/or customers.

In order to grasp the digital position of the V4 countries vis-à-vis the EU we analysed only selected manufacturing and service sectors (Tab. 1). We excluded sectors that traditionally belong to public administration or budget activities, which have no direct impact on the digitalization of national economies. Selected sectors accounted for a substantial part of value added of the V4 ranging from 75.9 to 81.2%, while the EU-28 recorded 73.3%. It means that the economies of the V4 countries have adopted a healthy economic approach and provide foundations for further development, while many other EU Member States have a high share of public services and activities whose positive impact on the economy is questionable.

In order to find out more about digital readiness of the V4 countries, we analysed digital intensity of the index in selected sectors, taking into account six aspects of digital business activities, broken down by groups of enterprises:

- using ERP software package to share information between different functional areas (ERP);

- using software solutions like Customer Relationship Management (CRM);
- issuing e-invoices suitable for automated processing (EI)
- whose business processes are automatically linked to those of their suppliers and/or customers (PAL);
- analysing big data from any data source
- buying cloud computing services used over the Internet.

2.2. Specialisation Indices

In order to establish digital readiness of the V4 countries we analysed two indices concerning their relative specialisation in the EU28 in two spheres: a structure of value added in selected sectors and digital intensity of manufacturing and service sectors in those countries.

As regards the first index, there are various attempts to present a sectoral/industrial specialisation of a given country. On the one hand, there are indices which describe a country's absolute specialisation (Storper et.al., 2002) and/or diversification (Rodgers, 1957), but on the other hand, there are heterogeneity indices (Krugman, 1991) which focus on the deviation of a country's industry structure from the average industry structure in the reference group of countries. We have chosen the Krugman Specialisation Index (Krugman, 1991), which is defined as follows:

$$KSI^i = \sum_i |s_j^i - s_j^{EU}| \quad (1)$$

where s_j^i is the gross value added share of sector j of country i and s_j^{EU} the GVA share of sector j of the EU. It measures the absolute distance between a sector's relative importance between country i and the EU, and then adds on all the sectors to generate an index. A lower KSI (1) means that a given country i is more similar to the EU in the same sectors, while a relatively higher value of KSI indicates a higher difference in the structure of value added in comparison to the EU – thus a country is considered to be more specialized (Table 1).

In order to grasp the digital sectoral specialisation of selected EU Member States we decided to examine an index that we constructed based on the calculation of Balassa index of comparative advantage. Traditionally, it reveals a country's comparative advantage in the trade of a particular product (Balassa, 1965), however, we need to stress that at the same time it shows the level of a country's export specialization in a given product compared to the average in the control group of countries (Ambroziak, 2018). Taking into account the latter assumption, we used its modified version to find out a relative (to the EU average) specialisation (advantage) in selected digital spheres (Relative Digital Specialisation). Its equation can be presented as follows:

$$RDS_{y,j}^i = \left(\frac{x_{y,j}^i}{\sum x_{y,j}^i} \right) / \left(\frac{x_{y,j}^{EU}}{\sum x_{y,j}^{EU}} \right) \quad (2)$$

where $RDS_{y,j}^i$ represents digital specialisation revealed in a digital activity y of a sector j in a country i ; $x_{y,j}^i$ denotes a number of companies engaged in digital activity y of a sector j in a country i ; and $x_{y,j}^{EU}$ shows the number of companies engaged in digital activity y of a sector j in the EU. This means, that in our case it compares the weight of the share of companies engaged in a digital activity in the total number of companies pursuing any digital activity under research in a given Member State with the weight of the same category at the EU level.

The traditional Revealed Comparative Advantage Index (2) takes a value between 0 to infinity with 1 as the break-even point. It means that its distribution is highly unstable. Therefore, many researchers proposed some changes in the standard Balassa's RCA (e.g. a symmetric RCA by Vollrath (1991); or additive RCA with a stable mean suggested by Hoen and Oosterhaven (2006)). Nonetheless, we decided to follow the concept proposed by Laursen (2000) the RDS index has been made symmetric, as $(RDS_j^i - 1) / (RDS_j^i + 1)$. It ranges from -1 to +1, where RDS_j^i ranges between 0 and +1 the country i specialises in a digital activity y of a sector j as compared to the EU-28 average.

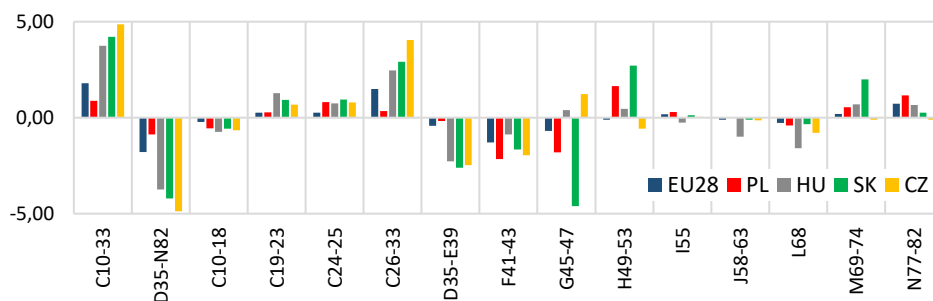
3. Discussion of Results

In the discussion of the survey results we took into account sectoral specialisation in value added and a relative specialisation in selected digital business activities.

3.1 Sectoral Specialisation in Value Added

Considering the Krugman Specialisation Index we can state, that the V4 countries are relatively strongly specialised in sectors other than the rest of the EU28. The highest disparity was recorded for Poland followed by Czechia and Hungary (Table 2). That phenomenon was driven, in particular, by the service sectors, while the KSI for manufacturing industries revealed a high level of similarity to the EU profile. It is worth noting that the structure of value added generated by selected sectors in the V4 countries has changed substantially since 2010. The EU, including the Visegrad countries, recorded an increase in value added in manufacturing branches with simultaneous decrease in services.

Figure 1: Changes in a Structure of Value Added in the EU and the V4 Countries in 2017 as Compared to 2010



Source: Own calculation based on Eurostat data.

The above occurrence was triggered mainly by a generous growth in the manufacturing of electronic, electrical products, machinery and transport equipment (C26-33) observed in Czechia, as well as in Hungary and Slovakia. A decrease in the share of value added of services resulted from a drop recorded in the construction, electricity and water supply, real estate services, as well as wholesale and retail trade. That phenomenon was found common to all the V4 countries, with some minor exceptions observed in the Hungarian and Slovak wholesale and retail trade activities. Unfortunately, the biggest disadvantageous disparities identified in the V4 countries in comparison to the EU-28 were related with professional, scientific and technical activities, information and telecommunication services, as well as administrative and support service activities. The aforementioned sectors are viewed as the frontrunners of new technologies needed to untap full potential of manufacturers through digitalization and servitization of their business activities.

3.2 Digital Specialisation

Taking into account the digital specialisation (intensity of business activities) of selected sectors in the V4 countries we can state that Polish, Hungarian and Slovak manufacturing sectors and the Czech service sectors recorded better results than the EU as a whole (Table 2.). When analysing sectoral distribution of DSI we found out that the best combination of the digital specialisation index and the share in value added was observed in Hungary. One sector, which contributed the most to the value added: manufacture of basic metals recorded moderate values of digital intensity indices. However, from among the sectors covered by the research, IT services were the undisputed leader in digitalization, with the highest values for all digital activities and a slightly lower value for the use of big data. Other sectors reported rather modest shares in the Hungarian value added in comparison to the EU average - with three exceptions including wholesale and retail trade, manufacture of coke and chemicals, and professional services, which reached better DSI values in selected digital areas relevant to their business activities, i.e., in e-invoicing, ERP and CRM. It is worth noting that those sectors had a considerable impact on the Hungarian total value added. This shows that sectors with the highest contribution to the Hungarian economy, recorded relatively best results in digital business activities. It is worth noting that some of them represent similar importance to the Hungarian and the EU economy.

The Czech Republic recorded a specific relationship between a contribution of selected sectors in value added and digital specialisation indices. Three out of the seven sectors, the biggest contributors to the Czech value added, recorded higher digital business activities indices than the EU: IT, professional and real estate services, while construction and wholesale and retail trade reported higher intensity of digitalization than the EU only in selected areas of their digital activities. At that same time, all the other sectors, whose contribution to value added was below 6%, did not reveal substantive digital activities. This confirms that sectors involved in the digital economy exert a bigger impact on the value added of Czechia.

In the case of Poland, the country reported higher digital specialisation indices (DSI) in only 2 out of five sectors of the highest importance to the economy: manufacture of electronic equipment and transportation, while wholesale and retail trade achieved moderate values, with the values for construction and professional services, as well as, manufacture of food ranging from moderate to modest. Higher DSIs were observed in the manufacture of coke and chemicals, of basic metals and IT services, however, these sectors did not play any prominent role in the Polish economy. It is worth noting, that as the two former sectors are among those, in which Poland specialised in comparison to the EU, the latter is underdeveloped, however with a growth potential. Apparently,, some Polish sectors, especially those, which represent a substantial part of the value added, should introduce more digital activities (wholesale trade and professional services) to join the European value chain and be able to expand in Poland.

Slightly similar situation was observed in Slovakia. The highest DSI values were found in sectors with less important contribution to the value added of that country: manufacture of basic metals, coke and chemicals and food. However, it is worth noting, that also two sectors with the highest shares in value added – manufacture of electronic equipment and wholesale and retail trade - recorded moderate values in digital intensity indices. Other sectors, important to the value added, reached much lower levels of digitalization. Therefore, we can conclude, that sectors, which joined the digitalisation process, did not substantially contribute to the value added, however, in near future, they can be important contributors to the economic development.

4. Conclusion

Based on our research we can formulate some conclusions valid for the V4 countries. First, the majority of sectors of the V4 countries engaged in digitalisation, operate in various areas of digital economy and rarely use only one or two means of digital activity. This means that digitalization, if implemented, is treated as a complex concept. Second, there is no clear relationship between the importance of given sectors for the value added and their digital business activities. We can observe that there is no V4 country which could enjoy high digital intensity of all sectors, which, at that same time, make a high contribution to the value added. This indicates that their economic development evolves in a traditional way and is not led by digitalization. Third, we found some sectors, specific to selected V4 countries, whose contribution to value added is relatively high, while their level of digitalization is low. These are branches, which without digital activities, would not be able to expand and join the European value chains. Four, at the same time, we can point out some sectors, whose share in value added is still small in the V4 countries, however, due to their relatively intense digital activities in all spheres under research, they can substantially change the present structure of value added, as digitalization is treated not as a need, but as a basic requirement for further development.

Finally, we can conclude, that the V4 countries, as EU Member States, have enough digital awareness and development, in such service sectors as information and communication activities, as well as, professional, science and technical activities. Nonetheless, the overall readiness of their service sectors is much lower in comparison to the industrial ones, especially those, which are important to transnational businesses: wholesale and retail trade, transportation, as well as, administrative and support activities. They have comparative advantage vis-à-vis other EU Member States and it seems, that their position could be strengthened if more digital solutions were applied. It is also worth noting, that the economy of the V4 countries is not substantially impacted by accommodation or real estate activities, while their share in the EU value added throughout a high level of digitalization is well recognised. As regards manufacturing sectors, they play an important role to the economy of the V4 countries, however, without going digital, their presence in the European economy can be limited.

Taking into account aforementioned conclusions, as well as COVID-19 pandemic, we see that there is a need for further research on the process of accelerating the digitisation of both manufacturing and service companies and its relative speed in selected sectors of the economy.

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Appendix

Table 1. Selected Manufacturing and Service Sectors.

NACE	Sector
C10-18	Manufacture of products based on: food, beverages, tobacco, textile, leather, wood, pulp and paper; publishing and printing
C19-23	Manufacture of coke, refined petroleum, chemical & basic pharmaceutical products, rubber & plastics
C24-25	Manufacture of basic metals & fabricated metal products excluding machines & equipment
C26-33	Manufacture of computers, electric & optical products, electrical equipment, machinery & equipment n.e.c, motor vehicles, other transport equipment, furniture, other manufacturing, repair & installation of machinery & equipment

D35-E39	Electricity, gas, steam, air conditioning and water supply
F41-43	Construction
G45-47	Wholesale and retail trade; repair of motor vehicles and motorcycles
H49-53	Transportation and storage
I55	Accommodation
J58-63	Information and communication
L68	Real estate activities
M69-74	Professional, scientific and technical activities
N77-82	Administrative and support service activities

Source: own selection based on NACE 2.2

Table 2. Digitalisation of the V4 Countries in 2018.

PL	G45-47	C26-33	F41-43	H49-53	M69-74	C10-18	L68	C19-23	D35-E39	J58-63	C24-25	N77-82	I55	C10-33	D35-N82
KSI	38.11													6.33	33.76
VA Share	23.1%	11.3%	9.3%	9.0%	7.8%	7.4%	6.5%	5.9%	5.6%	5.5%	3.7%	3.4%	1.7%	25.4%	74.6%
RCA VA	0.20	-0.08	0.12	0.15	-0.08	0.22	-0.41	0.10	0.19	-0.12	0.16	-0.31	-0.39	0.07	-0.02
ERP	0.02	0.13	-0.03	0.19	0.00	-0.05	-0.31	0.19	-0.03	0.17	0.03	-0.06	-0.40	0.07	-0.01
CRM	0.05	0.23	-0.03	0.34	-0.06	0.09	-0.29	0.32	0.13	0.15	0.16	-0.18	-0.41	0.19	-0.02
EI	0.12	0.29	-0.22	0.33	-0.09	0.10	-0.37	0.28	-0.52	0.18	0.22	-0.28	-0.44	0.21	-0.03
PAL	0.00	0.23	0.08	0.22	-0.15	0.04	-0.55	0.22	-0.24	0.22	0.11	-0.11	-0.43	0.15	-0.02
CC	0.04	0.28	-0.18	0.23	-0.05	-0.03	-0.38	0.26	0.06	0.28	0.22	-0.21	-0.48	0.19	-0.02
BD	0.00	0.18	-0.04	0.34	-0.11	0.02	-0.36	0.24	0.08	0.16	0.18	-0.18	-0.41	0.14	-0.01
HU	C26-33	G45-47	L68	H49-53	M69-74	C19-23	J58-63	F41-43	N77-82	C10-18	D35-E39	C24-25	I55	C10-33	D35-N82
KSI	23.22													9.73	22.23
VA Share	21.1%	13.5%	10.5%	8.2%	8.0%	7.9%	6.6%	5.7%	5.0%	4.7%	3.5%	2.9%	2.3%	30.4%	69.6%
RCA VA	0.22	-0.05	-0.17	0.12	0.26	-0.06	-0.01	-0.11	-0.10	0.02	-0.02	0.06	-0.24	0.18	-0.07
ERP	0.18	-0.02	-0.03	-0.02	0.17	0.00	0.31	-0.35	-0.09	-0.06	-0.08	-0.12	-0.08	0.06	-0.01
CRM	0.06	-0.01	-0.14	-0.13	0.06	0.09	0.33	-0.65	-0.04	-0.01	-0.17	-0.22	-0.14	-0.01	0.00
EI	0.06	0.12	-0.14	0.01	-0.02	0.07	0.28	-0.50	0.02	0.01	-0.33	0.03	-0.34	0.02	0.00
PAL	0.26	0.09	0.02	0.01	0.05	-0.20	0.24	-0.18	-0.20	-0.03	-0.34	-0.09	-0.45	0.09	-0.01
CC	0.15	-0.04	-0.22	0.00	0.14	0.04	0.26	-0.29	-0.04	-0.06	-0.20	0.00	-0.17	0.06	0.00
BD	0.27	-0.04	-0.19	-0.10	0.14	0.02	0.13	-0.04	-0.09	-0.02	-0.25	0.22	0.04	0.17	-0.01
SK	C26-33	G45-47	L68	F41-43	M69-74	H49-53	J58-63	C24-25	C19-23	D35-E39	C10-18	N77-82	I55	C10-33	D35-N82
KSI	19.96													3.96	19.09
VA Share	15.2%	13.5%	12.8%	10.4%	8.6%	8.4%	6.2%	5.2%	4.9%	4.5%	4.4%	4.1%	1.9%	25.1%	74.9%
RCA VA	0.04	-0.06	-0.09	0.19	-0.03	0.12	-0.05	0.33	0.02	0.10	-0.02	-0.21	-0.35	0.07	-0.02
ERP	0.04	0.00	-0.33	0.13	-0.01	-0.28	-0.04	0.48	0.20	-0.37	0.18	-0.14	-0.16	0.23	-0.04
CRM	0.15	0.08	-0.29	0.25	-0.18	0.02	0.04	0.42	0.37	-0.13	0.14	0.01	-0.50	0.24	-0.03
EI	0.13	0.11	-0.36	-0.35	0.02	-0.13	0.00	0.61	0.30	-0.36	0.37	-0.04	-0.56	0.37	-0.06
PAL	0.25	-0.03	-0.54	-0.12	-0.07	-0.29	0.20	0.59	-0.06	-0.28	0.32	0.05	-0.12	0.36	-0.06
CC	0.11	0.06	-0.53	0.04	-0.10	0.03	0.00	0.71	0.21	-0.13	0.32	0.02	-0.31	0.41	-0.05
BD	0.22	0.11	-0.13	-0.16	0.02	-0.09	-0.18	0.77	0.35	-0.39	0.04	-0.08	-0.36	0.41	-0.05
CZ	C26-33	G45-47	L68	H49-53	F41-43	J58-63	M69-74	C19-23	C10-18	D35-E39	C24-25	I55	N77-82	C10-33	D35-N82
KSI	29.78													12.66	26.92
VA Share	24.6%	13.6%	10.4%	7.0%	6.5%	6.4%	6.1%	5.8%	5.2%	5.1%	4.5%	2.6%	2.2%		
RCA VA	0.29	-0.04	-0.17	0.04	-0.03	-0.02	-0.18	0.12	0.08	0.17	0.28	-0.18	-0.48	0.22	-0.09
ERP	-0.25	-0.03	0.01	-0.34	0.03	0.08	0.13	-0.12	-0.14	-0.28	-0.19	-0.04	0.02	-0.19	0.02
CRM	-0.29	0.00	0.02	-0.37	-0.08	0.26	0.07	-0.03	-0.09	-0.26	-0.26	-0.22	-0.05	-0.18	0.01
EI	-0.24	0.10	0.04	-0.30	-0.29	0.05	0.19	-0.10	0.07	-0.59	-0.25	-0.14	-0.14	-0.08	0.01
PAL	-0.18	-0.03	0.05	-0.42	-0.06	0.25	0.14	-0.11	-0.12	-0.59	-0.10	0.09	-0.02	-0.14	0.01
CC	-0.30	-0.13	0.11	-0.31	0.09	0.01	0.10	-0.21	-0.17	-0.40	-0.16	-0.04	-0.04	-0.22	0.01
BD	-0.15	-0.08	-0.04	-0.25	0.04	0.09	0.18	-0.07	-0.26	-0.65	-0.19	-0.18	-0.03	-0.18	0.01

Source: Own calculations based on Eurostat.

Cultural Education and Cultural Exchange in the European Union Member States

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Abstract

The European Union promotes in long term the cultural cooperation and cultural exchange between the Member States and international organizations and countries outside the European Union. It is also contributing to the development of quality of education and training by promoting cooperation between Member States. Improving the teaching and learning of foreign languages and promoting external mobility are among the European Union's main priorities in education. The presented paper is aimed on the relation between culture and education. This relation is considered as significant, because culture has a great impact on education as well as education plays a major role in transmission of culture. The research focuses on evaluation of two areas that link education with culture. On one hand, tertiary students who are studying culture-related fields of education and on the other hand, the role played by education in facilitating cultural exchange, for example, by learning foreign languages or by promoting the mobility of tertiary education students between Member States of European Union. The evaluation is based on application of multicriteria decision-making methods and is involving all European Union Member States.

Keywords: cultural education, cultural exchange, European member states, evaluation, language skills

JEL Classification: F68, H11, Z10, Z19

1. Introduction

Culture can be defined as a social heritage of society which combines the beliefs, customs, religions, and arts. According to Eijnden, J. et al. (2017) culture shapes and gives expression to identity, makes personal and mass communication possible, drives the perception and experience of the world, and is also one of the driving forces behind the future economic development of the countries. Education on the other hand is the process of imparting knowledge or acquiring knowledge. Culture can potentially have a great impact on education as well as education has also an impact on cultures of a society. Both education and culture do influence each other (Europa, 2020a).

Culture, education and their interrelations are important aspects of European values and are the matter of actual interest in European Union (EU). EU's culture and education policies aim to address and promote the cultural dimension of European integration. Culture and education has the potential to narrow the gap between European societies and the process of integration (Bozoki, 2013). Moreover the human capital, the promotion of lifelong learning and support of creative industries are also important interrelations between culture cohesion and competitiveness. The interrelation of culture and education is demonstrated in praxis for

example by incorporation of cultural priorities into educational programs. The potential of education and culture should be exploited as a means of creating jobs and combating unemployment and an important aspect of long-term sustainability, see Drastichová (2016b).

The aim of the research is to assess the current state of cultural education and cultural exchange in the EU Member States. Cultural education and cultural exchange are important elements describing the link between culture and education. These areas have also been monitored by Eurostat, see Eurostat (2020) in the long term in the form of selected indicators. In the presented contribution are evaluated the current indicators in the field of cultural education and cultural exchange in the countries of the EU by usage of multicriteria decision-making methods, concrete by TOPSIS method. This method is successfully applicable in many decision-making tasks and various socio-economic areas. It is suitable for the evaluation of selected indicators in presented research, as it can process large-scale data with different units of criteria.

2. European Union Culture Policy

Culture plays an important role in EU policy. The EU's role in the culture area is specified in the article 3 of the Treaty on European Union and the article 167 of the Treaty of the Functioning of the EU. Member States have exclusive competence on cultural policy issues, while the Union's role is to encourage cooperation and to support and complement Member States' activities (European Commission, 2018). The EU declares a common goal for all EU member states in the field of culture by the European Agenda for Culture (Europa, 2020a).

Promoting culture as a tool for sustainable social and economic development is one of the European Commission's main objectives. The promotion of culture and intercultural dialogue plays here an important role in the interests of peaceful relations between communities (European Commission, 2018). The Commission also intends to use this agenda to underline the cultural dimension of sustainable development and to facilitate the implementation of the United Nation's 2030 Agenda for Sustainable Development (European Commission, 2018). The Sustainable Development Goals support the importance of culture as driver of sustainable development, for example the importance of non-violence and cultural diversity, safeguarding of natural and cultural heritage and creative industry (UNESCO, 2020). EU is monitoring the sustainability by Sustainable Development Indicators, see Drastichová (2016a).

Also the New Agenda for Culture from 2018, see European Commission (2018), supported by appropriate financial resources, is exploiting the synergies between culture and education. There are three mainly areas, that are promoted: active participation, mobility of workers in the cultural and creative sectors and removing barriers to their mobility and promoting art, culture and creative thinking in formal and non-formal education and training at all levels and in lifelong learning. Eurostat data suggest that more than a third of Europeans do not participate in cultural activities at all. So there is clear scope for increasing cultural participation in order to allow Europeans to experience what unites us instead of what divides us. Related to mobility, there are many factors — economic, social and psychological — which tend to lead to low geographical and occupational mobility. For example moving to a new location often appears to be costly due to numerous expenses involved in buying and selling a house. Especially there is evidenced less mobility of home owners, that is also considered as the reason of higher unemployment as proved by Slavata (2017) in Czech regions.

2.1 Cultural Education in the European Union

The arts and culture are indispensable to the education and development of young people, see Eijnden, J. et al. (2017). Understanding culture and the ability to engage with culture in all its manifestations are of great importance to everyone. Cultural education contributes to knowledge transfer, personal development and participation in society. It enables young people to develop their talents, introduces them to art and culture, makes them aware of aesthetics and ethics, and teaches them to express their feelings and to assign meaning (Bozoki, 2013). In addition, cultural education unlocks and gives access to the wealth of cultural history and insights into modern-day cultural communication aimed at children and young people. Last but not least cultural education gives enjoyment and contributes to one's overall sense of well-being (Europa, 2020b, Eurostat, 2020). In the 21st century, the role of education is to prepare children and young people for a life of learning in an international context. Giving each and every one of them equal access to cultural education and therefore to culture is of vital importance to their future (Eijnden, J. et al., 2017). There is a clear link between the level of education and participation in cultural activities, see Ardielli (2018). There is also a consensus on the need to transfer skills and competences that stimulate creativity and critical thinking. The Commission supports the work of the Organization for Economic Cooperation and Development (OECD) on teaching, learning and assessing creative and critical thinking practices, which is now an innovative area of the International Student Assessment Program (PISA) 2021. This focus on creative and critical thinking should extend it to all levels of education and training and also higher education, in line with the change in approach of including the element of art in the fields of science, technology, engineering and mathematics (OECD, 2020). The Commission intends to promote music and the arts in education and training, also as a priority theme of the Erasmus + program, and to support the development of interdisciplinary modules within higher education institutions that focus on creativity and combine art, information and communication technologies, business and commercial competence (Europa, 2020b).

2.2 Cultural Exchange in the European Union

Cultural exchange is understood as sharing different ideas, traditions and knowledge with someone who comes from a completely different cultural environment. There are many ways to promote cultural exchange in European Union. The most famous projects include the Erasmus program, CEEPUS, AKTION or EHP funds (Europa, 2020b). The Erasmus Programme (European Community Action Scheme for the Mobility of University Students) is a EU student exchange programme established in 1987. Erasmus+, or Erasmus Plus, is the new programme combining all the EU's current schemes for education, training, youth and sport, which was started in January 2014. Erasmus+ is one of the European Union's most successful and iconic programmes. With an indicative financial envelope of €16.3 billion for the period 2014-2020, Erasmus+ helps European countries to modernise and improve their education and training systems as well as their youth and sport policies, reinforcing their role as drivers for growth, employment, competitiveness, innovation and social cohesion (European Union, 2017). The aim of Erasmus+ is to contribute to the Europe 2020 strategy for growth, jobs, social equity and inclusion, as well as the aims of ET2020, the EU's strategic framework for education and training. Erasmus+ also aims to promote the sustainable development of its partners in the field of higher education, and contribute to achieving the objectives of the EU Youth Strategy. Specific issues tackled by the programme include:

1. Reducing unemployment, especially among young people,
2. Promoting adult learning, especially for new skills required by the labour market,

3. Encouraging young people to take part in European democracy,
4. Supporting innovation, cooperation and reform,
5. Reducing early school leaving,
6. Promoting cooperation and mobility with the EU's partner countries; see Europa (2020b)

More than 9 million people have participated to the Erasmus program since its creation. The number of young participants has increased significantly since 1987. As of 2014, the programme has promoted the mobility of more than 3.3 million students within the European community. Spain is the country that allowed most people to participate to Erasmus with more than 40,000 per year, ahead of France, Germany and Italy. The countries receiving the most students are Spain with more than 39,000 students and then Germany. More than 4,000 university institutions from 37 countries are participating in the project (Eurostat, 2020). On 30 May 2018, the European Commission adopted its proposal for the next Erasmus programme, with a doubling of the budget to 30 billion euros for the period 2021-2027. Further negotiations are expected to take place during the 2019-2024 European parliamentary term, see Europa (2020b). For many European students, the Erasmus Programme is their first time living and studying in another country. Hence, it has become a cultural phenomenon and is popular among European students (Europa, 2020b). The programme fosters learning and understanding of the host country, and the Erasmus experience is considered both a time for learning as well as a chance to socialise and experience a different culture. It is seen as a great opportunity to study abroad while not having the unmanageable expense of studying because the students are getting grants available to Erasmus students (European Union, 2017).

3. Problem Formulation and Methodology

In this contribution, the issue of assessing cultural education and cultural exchange in EU Member States is addressed through the application of MCDM methods – TOPSIS method. The theory of multicriterial analysis of variants deals with the problems of how to select one or more variants from the set of permissible variants and recommend them for implementation (Šubrt et al., 2015). The purpose of the application of MCDM methods is to find the most suitable variant or to make an arrangement of the set of variants. In the case of cultural education and cultural exchange assessment in EU Member States, presented in this paper, 28 EU Member States are considered as individual variants (set of p variants), and the output is the ranking of these Member States from the best to the worst. Variants are assessed on the basis of k criteria (4 selected indicators from Eurostat database). The Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) is a multi-criteria decision analysis method, which was originally developed by Ching-Lai Hwang and Yoon in 1981. Because of its high flexibility, it is often and widely used in various situations to solve many theoretical and real-world problems (Roszkowska, 2011). For example Ardielli (2019) used TOPSIS method for assessing of Good Governance in EU countries or Vrabková, Ertingerová and Vavrek (2019) for assessing of websites of retirement houses.

3.1 Model and Data

TOPSIS method provides a complete arrangement of all variants. Required input data are criteria values for individual variants and weights of individual criteria. The criteria values for the individual variants are arranged in the criterion matrix $Y = (y_{ij})$, where y_{ij} is the value of the i -th variant evaluated by the j -th criterion. It is assumed the maximizing character of criteria. The method is based on the selection of the variant closest to the ideal variant represented by the vector (H_1, H_2, \dots, H_k) and furthest from the basal variant represented by the vector (D_1, D_2, \dots, D_k) . Application of TOPSIS method is described in seven steps:

1. Establishing a performance matrix,
2. Normalizing the decision matrix,
3. Calculating the weighted normalized decision matrix,
4. Determining the positive ideal and negative ideal solutions,
5. Calculating the separation measures,
6. Calculating the relative closeness to ideal solution,
7. Ranking the preference order;

This research focuses on two areas that link education with culture:

- a) Cultural education based on tertiary students who are studying culture-related fields of education (arts, humanities and languages, journalism and information and architecture and town planning) and by learning foreign languages;
- b) Cultural exchange based on the mobility of tertiary education students between EU Member States;

The indicators of cultural education and cultural exchange were taken from the Eurostat database and adjusted for calculation purposes, see (Eurostat, 2020). The majority of the computed data presented the state to 2017.

3.2 Method

TOPSIS is based on the concept that the chosen alternative should have the shortest geometric distance from the positive ideal solution (PIS) and the longest geometric distance from the negative ideal solution (NIS), see Assari, Mahesh and Assari (2012). It is a method of compensatory aggregation that compares a set of alternatives by identifying weights for each criterion, normalising scores for each criterion and calculating the geometric distance between each alternative and the ideal alternative, which is the best score in each criterion. An assumption of TOPSIS is that the criteria are monotonically increasing or decreasing. Normalisation is usually required as the parameters or criteria are often of incongruous dimensions in multi-criteria problems (Yoon and Hwang, 1995).

4. Problem Solution

The calculation by using the TOPSIS method is based on the determination of weight for the criteria. The approaches of determining weights are divided into two groups: subjective and objective. The weights of the criteria in this research are calculated on the basis of the subjective methods, by scoring method. The main two areas (cultural education and cultural exchange) were given the equal importance. The characteristics and weights of indicators are summarized in Table 1.

Table 1: Weights of Indicators

	Cultural education		Cultural exchange	
Indicator	Tertiary students in culture-related fields of education	Number of languages in upper secondary education	Mobile Erasmus students and trainees - incoming	Mobile Erasmus students and trainees - outgoing
Unit	% share of all tertiary students	Number	% share of all enrolled students	% share of all enrolled students
Weight	0,26667	0,23333	0,16667	0,33333

Source: Own calculations according to Eurostat (2020)

The TOPSIS method was processed according to the TOPSIS algorithm, Figure 1. The results are summarised in the Table 2.

Table 2: Evaluation of EU Countries by Usage of TOPSIS Method (2017)

Rank	Country	Relative distance indicator	Rank	Country	Relative distance indicator
1	Luxembourg	0.89287	15	Austria	0.17133
2	Malta	0.48585	16	Ireland	0.16697
3	Lithuania	0.34337	17	Romania	0.16677
4	Estonia	0.26676	18	Sweden	0.15202
5	Portugal	0.26497	19	Netherlands	0.13994
6	Finland	0.25835	20	United Kingdom	0.13704
7	Latvia	0.25820	21	Cyprus	0.13604
8	Slovenia	0.24498	22	Germany	0.13561
9	Slovakia	0.23173	23	Hungary	0.13306
10	Czech Republic	0.22389	24	Denmark	0.13268
11	Italy	0.21854	25	Poland	0.12792
12	France	0.20086	26	Bulgaria	0.10585
13	Belgium	0.18766	27	Croatia	0.10021
14	Spain	0.18510	28	Greece	0.09510

Source: Own calculations according to Eurostat (2020)

The results of EU Member States are ordered according to the value of relative distance indicator. In the year 2017, the best five positions occupied Luxembourg, Malta, Lithuania, Estonia, and Portugal. These results do not correspond exactly to those resulting from Erasmus statistics and Eurostat statistics, see European Union (2017) or Eurostat (2020b) or other studies like Ardielli (2017), comparing the cultural indicators in EU countries. The most controversial is the position of Spain, Germany, United Kingdom and France. These countries are hosting and sending students abroad to the greatest extent, therefore, it would be expected that they will be placed on the top positions. However in this research the data on incoming and outgoing students were converted to the proportion of total enrolled students in the country, the data therefore does not reflect the size of the country. In addition, significant weight has been also given to cultural education. For example in Spain or United Kingdom is on average taught only one foreign language on secondary education level. As a result, large countries have taken average positions in the evaluated indicators. Small countries on contrary, like Luxembourg, Malta, Lithuania, Estonia, or Czech Republic are having the largest share of outgoing students on total enrolled students in the country. Moreover, they have a good level of cultural education. For this reason, they ranked very well in the evaluation. On the worst five positions placed Denmark, Poland, Bulgaria, Croatia and Greece. The position of Denmark is poor because only one foreign language is taught on secondary education level. In other indicators it performs slightly above average. In case of Bulgaria and Greece the shares of incoming and outgoing students are very poor. Poland and Croatia than report low values in all selected indicators. Because the weights of the criteria could have a big influence on the ranking also the equal weights were processed to compare

the results. On the top five positions ranked also Luxembourg, Malta, Lithuania, Estonia, and Finland. Portugal occupied the 6th position. On the last five positions placed Germany, Denmark, Bulgaria, Croatia and Greece. Poland shifted to the 21th position. By usage of the equal weights the result achieved was very similar.

5. Conclusion

In the paper was performed the sorting of variants according to defined criteria by usage of TOPSIS method. The benefits of compensatory methods such as TOPSIS is that they allow trade-offs between criteria, where a poor result in one criterion can be negated by a good result in another criterion. This provides a more realistic form of modelling than non-compensatory methods. As a result, countries were ranked according to the performance in cultural education and cultural exchange. It was found, that the most successful EU Member States in this area are small and multicultural countries like Luxembourg or Malta. Big countries and countries considered as leaders in numbers of incoming and outgoing students in Erasmus program placed in this research on average places, since the data were recalculated on the number of enrolled students in the country. On the contrary, the worst-performing EU countries are Denmark, Poland, Bulgaria, Croatia and Greece. The results were verified by usage of equal weights to rule out that weights have a predominant influence on the result. According to the results the countries at the bottom positions should improve the foreign language teaching in their educational policies and support and motivate the university students for the study abroad. As the next stage of this research is intended to compare the results in different years and to perform the evaluation of the development.

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Creative Europe and Its Contribution to Smart, Sustainable and Inclusive Growth

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Abstract

Presented paper deals with the Creative Europe program, which ends its programming period this year (2014-2020). The program was aimed to help the creative industries to enter new markets, gain new audiences and thus reach their economic potential in the digital and globalised world. An EY study from 2015 showed that the creative industry had a competency potential for the European Union already during the crisis. This potential cannot be understood purely economically. Through other aspects and innovative production with high added value, creative industries contribute to social cohesion, sustainable and inclusive growth. In this article we try to analyse the aspects in more detail and outline the future of this specific sector of the European economy.

Keywords: *Creative Europe, creative industries, social cohesion, sustainable and inclusive growth*

JEL Classification: Z00, Z11, Z18

1. Introduction

The debate on culture has been experiencing a renaissance in recent years, not only in the European Union (EU). Although the EU is facing problems that are fundamental to its functioning, the topic of culture resonates here. The problem of cultural management in many EU countries is that it has been under-funded for a long time, especially in the younger Member States. And it was precisely the reason why the Creative Europe program was adopted – to promote the culture, cultural divisions, cultural heritage and diversity of Europe as well as to unleash the potential of the cultural and creative industries. The Creative Europe Program was adopted with Regulation (EU) No 1295/2013, for the programming period of 1 January 2014 until 31 December 2020. The Programme's main objectives are:

- (a) to safeguard, develop and promote European cultural and linguistic diversity and to promote Europe's cultural heritage;
- (b) to strengthen the competitiveness of the European cultural and creative sectors, in particular the audio-visual sector, with a view to promoting smart, sustainable and inclusive growth (European Commission [online], 2018).

Regulation (EU) No 1295/2013 explicitly says: “*Union needs to provide more attractive framework conditions for innovation and creativity (...) Moreover, excellence and competitiveness in those sectors are primarily the result of efforts on the part of artists, creators and professionals that need to be promoted.*” (European Commission [online], 2013).

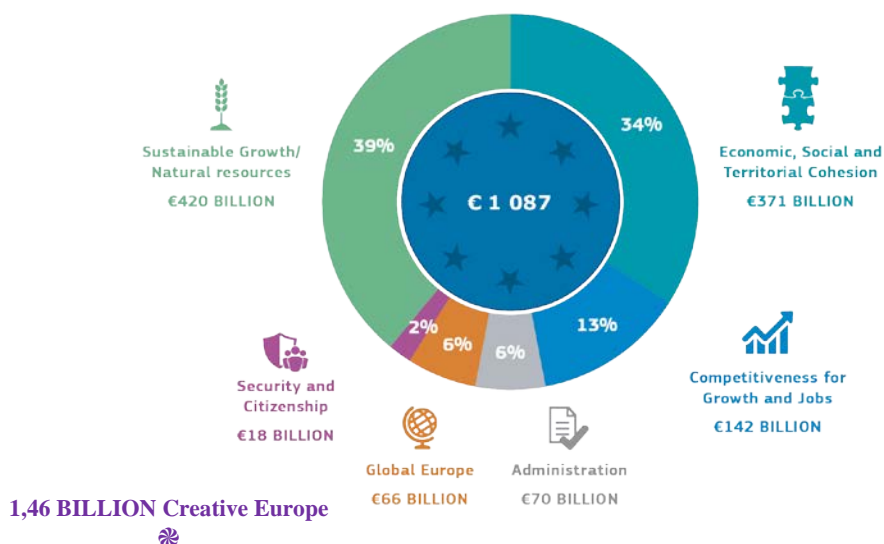
Culture promotes innovation, contributes to economic growth and creates new jobs. It is an important driving force of European identity. Targeting the culture and creative industries in the EU is very important (Cetină, Badin, 2019). The main aim of presented paper is thus to analyse these aspects in more detail and outline the future of these specific sectors of the European economy with respect to the new Multiannual Financial Framework for 2021-2027. We are focusing on the link between Creative Europe and Europe 2020, which it emphasizes smart, sustainable and inclusive growth. We try to answer the question of how creative industries can contribute to such growth and development.

2. Creative Europe – Current Scheme and Its Position in The Multiannual Financial Framework (MFF) 2021-2027

The Creative Europe program reflects the basic strategic policy objectives included in the Europe 2020 program, in particular smart, sustainable and inclusive growth. The new program includes the Culture sub-program, which supports theatrical and visual arts, cultural heritage and other areas, and the MEDIA sub-program, which finances the film and audio-visual sector. The new cross-sectoral area will support policy cooperation, cross-cutting measures and a new financial guarantee instrument operating since 2016. All schemes have a new dimension – they are focused on the development of audience. The most important innovation is the new support platform, focusing on emerging talents and stimulating European non-national programming of cultural activities. The program is open also to non-EU countries (as of February 2020 the NON-EU countries, who participated are Iceland, Norway, Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Republic of Serbia, Georgia, Moldova, Ukraine, Tunisia, Armenia, Kosovo) (European Commission, [online] 2020) and focuses mainly on SME or non-profit organisations. In addition to the main two sub-programs, Creative Europe also covers (among others) the popular European Capital of Culture initiative. The total budget of the program amounts 1.46 billion euro and more than 50 % was dedicated to MEDIA sub-program. (Zygierewicz, 2018).

Culture support does not seem to remain behind in the next programming period. Indeed, the Commission proposes to increase the program budget to EUR 1.85 billion (European Music Council [online], 2020). The new concept of the program is intended to reflect the current challenges in the cultural and creative industries, with increasing new global competition (especially new players from Asia or Latin America), a digital era bringing a paradigm shift (total change in the cultural and creative goods market, change in the distribution chain) but also market fragmentation, which on the one hand is positive (cultural diversity of the European region), but on the other, it makes it difficult for the artist to gain audience). On 5 December 2019, the Finnish Presidency published a so-called Negotiating framework with figures (for the MFF 2021-2027). The Creative Europe program falls within the area of investing in people, social cohesion and values (p. 74) which in itself suggests the benefits the Union sees in the creative industries.

Creative Europe is a program of support and therefore financial assistance to cultural and creative industries being currently a driving force within the new technologies development for making business in terms of cluster cooperation hence to support small and medium sized entrepreneurship in EU (Kordos, 2018a; Kordos, 2018b). However, it is important to ask why it makes sense to support cultural and creative industries and what this support can bring.

Figure 1: The Share of EU Budget on Funding Programmes 2014-2020

Source: European Commission: *EU Funding Programmes 2014-2020* https://ec.europa.eu/info/strategy/eu-budget/spending/topic/eu-funding-programmes-2014-2020_en

3. Problem Formulation and Methodology

The main question of our reflection is thus how far culture and creative industries can help to achieve smart, inclusive, sustainable growth and whether these industries are relevant to such growth at all. The contribution of cultural and creative industries (CCIs) to economic growth in the EU has already been examined by the EY study, which confirmed the growth potential of these sectors, but in particular brought about two fairly crucial facts, namely that CCIs have continued to grow during the crisis and that they have increasing tendency in youth employment. Today, however, some enthusiasm around these amazing findings has fallen. Some theories of the creative industry (such as the Florida's Rise of the Creative Class) have been questioned and it seems that the growth potential of CCIs has not been particularly fulfilled. In examining the economic benefits of CCIs, we have somehow forgotten other aspects that this cultural activity with cross-sectoral intersection brings. These aspects are not primarily economic and monetizable, but they can ultimately have a positive and significant impact on growth:

Therefore, in our evaluation we focus on:

- the impact of culture in the process of sustainable urban development and the development of community identity;
- the impact of cultural vitality and cultural potential;
- the impact of CCIs on social cohesion and the reduction of regional disparities.

4. Inclusive and Sustainable Growth: The Role of Culture and Creative Industries

Inclusive and sustainable growth is defined by the Organisation for Economic Co-operation and Development (OECD) (2016) as: *“Economic growth that creates opportunities for all segments of the population and distributes dividends of increased prosperity, both in monetary and non-monetary terms, fairly across societies (...) focus on health equity, human capital, environmental quality, social protection and food security.”* Very famous United Nations’ definition stresses that *„Sustainable Development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”* British Council (2018) believe that inclusive growth means developing tangible opportunities which create economic and social growth that benefits everyone. A common feature of these but also other definitions of sustainable and inclusive growth is the well-being or benefit for everyone (ie equality) and the fulfilment of human needs without harming nature. The role of culture in these processes is diverse.

4.1 The Impact of Cultural Policy in the Process of Sustainable Urban Development and the Development of Community Identity

The role of culture in the process of sustainable urban development has been described by several theories. Perhaps the best known was Florida's creative class theory. Like most other theories, it was concentrated and centralized (Klein J.L et. al, 2019). The creative class theory assumed the concentration of all resources to attract this workforce to the city - the city had to be attractive to the creative class. Consequently, it could benefit from its activities and ensure its growth as well as the growth of the region. This theory deserved criticism (Moulaert, Demuyne, Nussbaumer, 2004, Krätke, 2010) later even from the author himself (Klein J.L et. al, 2019), who admitted that in fact, only the rich had benefited from the effects of creative class concentration in large cities (such as London). This is entirely contrary to the original idea that the creative industry is involved in social inclusion and balances regional disparities.

This elitist approach has changed into a citizen's well-being orientation. The inclusive local culture support strategies that are emerging have a positive impact on the neighbourhood and social capital of the community and thus on the whole city. Cultural policy makes sense in sustainable urban development because it affects:

- identity;
- management and territorial coordination.

The issue of sustainable urban development is linked to the current concept of smart cities and villages. The concept of smart villages is one of many EU instruments of improvement of the living conditions in the countryside. (Harakaľová, 2018). These concepts have evolved and today they are not one-sidedly focused on the application of technology in urban development. Smart solutions emphasize the well-being of citizens, the environment. The community concept and the economy of sharing are being strengthened. Cultural industries and cultural policy also have a role to play in creating such an environment. De Propis and Cooke believe they can spur local regeneration in rural areas. At the same time, they emphasize that cultural and creative industries are more innovative than other industries. Innovative activity depends directly on socio-cultural values (Pylypenko et. al., 2019). In addition, Chapain (2010) adds that their production, which serves as an input for other sectors, increases the added value of the output of these sectors. CCIs thus contribute to the economic growth of the city or region. Taking into account the theory of clustering, such industries will tend to concentrate and generate economies of scale, which is another desirable economic effect.

British council believes that engaging, learning and promoting cultural heritage can play as a valuable contributor to economic growth, stimulating tourism, creating jobs and enhancing the investment climate. Strengthening the engagement of people in the local culture stimulates a sense of identity and a sense of integration into a community. This incorporates then strengthens the sharing of common values, attitudes, opinions. As the countries of the European Union are culturally very diverse, strengthening individual local or national identities also contributes to creating a sense of European identity.

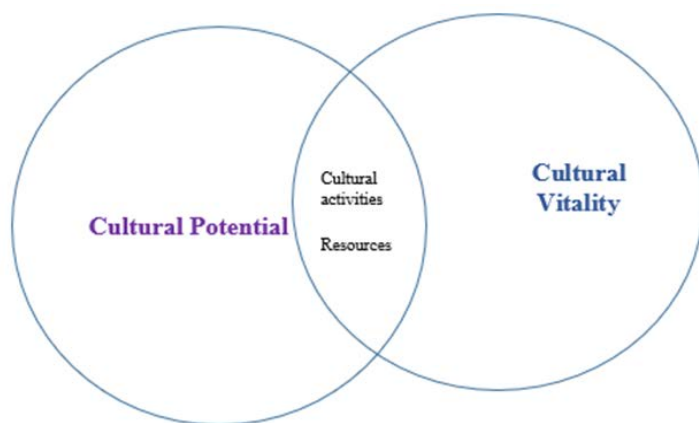
The scope of cultural policy today is very broad. It ensures adequate protection of the cultural heritage (Lixinski, 2009), sets the allocation of financial resources, which has a direct impact on the development of regions, the creation of employment in culture and the mobilization of cultural potential. It regulates the management and administration of cultural facilities and institutions and sets up education in the field of culture. Cultural identity helps the interaction between local actors and thus promote spreading the cultural activities amongst diverse groups.

4.2 The Impact of Cultural Vitality and Cultural Potential

Klein J.L et. al (2019) elaborated a study emphasizing that one of the factors that influence the socio-economic dynamics of a city or region is cultural vitality. Cultural vitality can be understood as a set of characteristics of a place – the presence of organizations active in the cultural and creative industries and the cultural activity itself, its governance, financial and organizational resources as well as the above-mentioned identity. Jackson, Kabwasa-Green and Herranz (2006) built a definition of cultural vitality based on the daily life of the community. In doing so, there are three dimensions to cultural vitality - the existence of opportunities to engage in cultural activities, the very involvement of cultural activities, and the third dimension is the promotion of these cultural activities. The third dimension is the space for policy making. Creative Europe, too, has an irreplaceable role on the European continent.

Cultural potential is the sum of cultural values - cultural phenomena and their individual components - of cultural elements that can be exploited; the whole complex of cultural heritage, non-institutional creation and organized production of institutions providing cultural services (Lenovský, Čukan, Dubská, Michalík, 2014, p. 7). Cultural potential, when properly used, is transformed into cultural capital. Cultural capital also means a competitive advantage. Culture can therefore be an important factor in regional and local development, but only if cultural values are communicated to the public.

Figure 2: The Relations between Cultural Potential and Cultural Vitality



Source: author's own processing

4.3 The Impact of CCIs on Social Cohesion and the Reduction of Regional Disparities

Regions of EU suffer from disparities. This is visible also inside particular member states (Slovakia including). According to de Propis and Cooke (2011), culture and creative industries can stimulate the service sector or upgrade the traditional manufacturing sectors with sustainable high value added production. CCIs can thus act as accelerator for those regions, who are fighting a declining industrial activity or an ever-present agrarian economy. This effect of improvement is very visible in the most dynamically growing CCI segments, especially in the gaming sector, design and digital technologies.

John Hawkes offers the definition that culture is '*The Fourth Pillar of Sustainability*': According to Hawkes, culture allows people to express themselves, creates a sense of connection and cooperation. (Hawkes, 2004) Traditional cultural production (such as crafts) allows people who are for various reasons not employed to participate in the economic process. This effect is most pronounced in developing countries where there is hardly any job opportunity. It enables women to be better involved (not only on maternity leave) in social life and fosters community feeling and belonging, which ultimately leads to a strengthening of cultural identity.

Cultural activities bring together people with different opinions, habits and beliefs from different conditions and thus contribute to increasing intercultural competences and mutual understanding. Recognizing and understanding each other's differences contributes to the prevention of unwanted attitudes such as bullying, racism and improves the involvement of disadvantaged groups.

5. Conclusion

The merits of supporting the culture and creative industries are linked to a number of different mechanisms. It turns out that the influence of culture is multidimensional. While the economic view of cultural industries has dominated in recent years, several studies now confirm the complex impact of culture - promoting innovative thinking and contributing to innovation in other industries. It contributes to sustainable urban development. Sharing common cultural values helps community development, fosters feelings of belonging, understanding, and participates in creating and promoting common attitudes and values. Such community cohabitation helps to build neighbourhoods, which ultimately leads to an inclusive development of the whole city.

Cultural participation contributes to social cohesion and improves the participation of minority groups in society. The cultural potential of regions can be translated into a cultural asset and thus actively participate in reducing regional disparities. Cultural tourism is a specific sector that can use this cultural potential of the region.

Thus, quantifying the economic benefits of culture, which has been emphasized in recent years, is not the only evidence of the importance of the cultural and creative industries. On the contrary - given the complex mechanism of action of culture, its non-quantifiable benefits are much more important in the context of sustainable and qualitative growth. Therefore, while we can measure the economic activity of creative industries (not culture itself), these industries need to be treated with respect. They bring EU states more than just a percentage of GDP.

The Creative Europe program emphasizes the cultural tradition and diversity that the Union has due to the rich culture of its Member States – after all, the EU motto “United in diversity”

confirms this. The budget increase for the new programming period confirms that promoting culture is becoming one of its priorities.

In the future research, however, it will be interesting to see where the increase in funds will go and, therefore, in which sub-program it will benefit most. It will be necessary to monitor the development of individual creative sectors receiving support in a multiannual perspective in order to assess whether and how the drawing of funds contributed to their development. Subsequently, support for other dynamically developing sectors may be considered or vice versa, for sectors that are not market-successful but significant in terms of uneconomic benefits.

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Monetary Aggregates in Selected EU Country

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Abstract

The papers deals with monetary aggregates in the selected EU country – France and with some selected issues of monetary economics in France. The author therefore focuses his attention of the opening chapter on the French central bank, i.e. the Banque de France. There is mentioned its historical development, evolution of its independence, its basic structure and the process of its European integration. In the next chapter, attention is paid to the composition of the money supply in France. Here is discussed about financial products, respectively monetary aggregates, which due to the natural development of society had to be redefined (not only) in France. The last chapter presents selected instruments of monetary policy regulation in France as one of the EU countries.

Keywords: EU integration, France, monetary aggregates, public finance

JEL Classification: K19, K23, K33

1. Introduction

In France, as in other countries, monetary policy is determined by the central bank. In the case of France, the Banque de France discharge the function of the central bank. Nowadays, a significant share of monetary policy powers, both in France and in other states belonging to the European Union, has been transferred to the European Central Bank. In this respect, one can observe and above all talk about the transfer of part of monetary sovereignty from a given Member State to a supranational organization - the European Union. Monetary sovereignty is a situation where the state is able to manage its own currency by its own legal norms. As we know, it was not only France that, in order to meet the Maastricht criteria, voluntarily transferred part of its monetary sovereignty to the European Union and its central bank (Mrkývka, 2014). All member countries of the European Union had previously participated in this process, unless they had an agreed exception (the UK case), respectively have not agreed to postpone the adoption of the common European currency (the case of the Czech Republic). In monetary economics, however, we are not only examining the issue of the central bank, but also, for example, the issue of money, various currency crises, monetary unions and many other phenomena, which can be described partly as financial, partly as economic.

The aim of this paper is to introduce selected problems of monetary economics in France. From the point of view of the system classification, this area, or more precisely its selected elements mentioned in the paper, can be subsumed under monetary law, which is a part of financial law. Monetary law is a sub-branch of financial law and according to the Brno School of Financial Law it belongs to the non-fiscal part of financial law (Mrkývka, Pařízková, 2009).

2. Problem Formulation and Methodology

To accomplish the above task, the paper uses the descriptive method, or rather methods of historical description, which at first appropriately allows to introduce or at least to approximate the issue. Furthermore, the paper uses a method of comparison, which, for example, helps to compare the situation of central banks in different countries of the world. The author in his paper primarily proceeds from the French scientific literature, i.e. primarily from the publications of the French law professor Michel Bouvier (Bouvier, 2016). While internal scientific literature almost completely neglects the French concept of public finance, in Poland, for instance, there is a stronger tendency to be inspired by the French financial science (due to the advanced level of the Polish financial science as well as historical tradition). For example, Prof. Mariola Lemonnier of the Department of Financial Law in Olsztyn (Lemonnier, 2017) or Prof. Eugeniusz Ruśkowski of the Department of Public Finance and Financial Law in Białystok (Ruśkowski, 2014). On the other hand, as regards to the internal approach to financial law, it can be only recommend the aforementioned school of financial law in Brno, not only in view of its high erudition, high quality and broad range of publications but also with regard to its research to a considerable level of her didactics. The issue of monetary aggregate is also solved by Czech authors (Tomášková, Kaňovská, 2019), by Serbia authors (Bartlett, Dulić, Kmezić, 2019) or by Hungarian authors (Soltész, Zilahy, 2019).

3. Banque de France

The status of Banque de France has evolved considerably throughout history. However, this status has changed more than ever, thanks to the introduction of the European System of Central Banks, the creation of the European Central Bank and the replacement of national currencies by the euro.

3.1 Historical Development of Banque de France and its Independence

The Banque de France was created in its early, germinal form as early as 1800, but its first official appearance dates back to the 1808 Banque de France Decree. Already at that time, the problem of central bank's independence from the government arose. Napoleon himself has expressed his wish: "I want the Bank to be in the hands of the government, but not too much..." (Bouvier, 2016). Thus the Bank was a private enterprise, a joint-stock company maintaining privileged ties by the State. The power of shareholders was expressed on the one hand through a General Meeting, which had the peculiarity of being composed of the 200 largest shareholders (hence the myth of the so-called "200 families") and on the other hand through the so-called "regents" or board members, who were elected by the General Meeting and formed the Board of Directors of the Bank. This system had to be modified in several stages:

- the Act of 24 July 1936 removed the representatives of private equity in the management of the Bank. However, the Act did not carry out genuine nationalization, because the legal nature of the Bank remained unchanged;
- the nationalization occurred only 9 years later with the Act of 2 December 1945. The bank remained an anonymous company, but the state became the sole shareholder;
- the Act of 3 January 1973, supplemented by the Decree of 30 January 1973, modernized the Bank's position, but without bringing about a fundamental change in the previous legal situation;

- the Act of 4 August 1993 and the Act of 31 December 1993, supplemented by the Convention on the Management of Foreign Exchange Reserves, confirmed the independence of the Bank imposed by the Maastricht Treaty.

However, it should be noted that the Banque de France has never been an ordinary body of the state, never included in the hierarchy of government that would receive orders directly from the Minister of Finance. The Bank has always had a separate legal personality –the status of the Bank was the legal person responsible for the performance of public services under the French law.

The real problem that gave rise to regular debates was not so much the legal nature of the Bank's establishment as its degree of independence from political power. Therefore there was discussed the question whether the Bank was an assistant who participated in the pursuit of the overall economic policy by its own means, or rather the Bank having had its own task, which it had to pursue independently. Such a problem has occurred in all countries and all central banks. The problem is both political and economic political point of view because it is necessary to know whether the Bank is able to protect democracy from the intentions of individual elected governments. The economic point of view is that the answer to the question of independence depends on the more or less active role we assign to money.

In Western European countries, there are several "models" of central banks, whose main features reflect historical developments. E.g. Japan's central bank is legally supervised by the Minister of Finance, while the Deutsche Bundesbank is independent of federal government instructions. It is also necessary to distinguish between theory and practice. The central bank can influence (and also very often does the influence) the course of the main economic policy, despite the possible limitations when the law determines its activity. E.g. in 1990, the Bundesbank was put in the way of a monetary union between the German Democratic Republic and the Federal Republic of Germany. Finally, Kohl's government chose a "political" conversion rate between the two marks. A few months later, the Governor of the Bundesbank resigned.

3.2 Banque de France - Basic Structure

The Act of 20 May 1998 regulated the status of the Banque de France, in view of its incorporation into the European System of Central Banks, which consists of the national central banks and the European Central Bank. The function and role of the Banque de France have profoundly changed. Therefore, the Bank's organization was changed by the Act of 20 December 2007. The management of the Bank is organized by the Governor and two Vice-Governors, who are appointed by a decree of the Council of Ministers for a term of six years, which may be extended. They may be removed only for serious misconduct or when they are unable to perform their duties. It should be noted that the inclusion of the Banque de France in the European system imposes a dual function on the governor; from now on, excluding the national function it also holds a "European" function as a member of the Central Bank Governing Council.

The Governor presides over two advisory bodies. The first body existed before the 1993 reform, but its composition and the method of appointing its members were significantly rebuilt. It is the General Council of the Banque de France, which ensures the management of the Institute, decides on the use of its own resources and the status of its employees (the General Council has an identical composition as the Monetary Policy Council, but on top of that includes representatives of elected employees). With the exception of the Governor and two Vice-Governors, this institution is comprised of two members appointed by the President

of the Senate, two other members appointed by the President of the National Assembly, two members also appointed by the Council of Ministers on a proposal from the Minister of Finance and the advisor is elected by the employees.

The second and the new body was introduced by the Act of 20 December 2007 on various provisions concerning the Banque de France. It is the Monetary Committee of the General Council, which replaces the Monetary Policy Council (the Monetary Policy Council was created as a result of the Bank's expansion of monetary powers, but it has lost much of its importance after the integration of the Bank into the European System of Central Banks). The Committee at least once a month "reviews monetary course and analyzes the implications of monetary policy developed within the framework of the European Monetary System of Central Banks. The Committee takes the necessary measures to implement the guidelines of the European Central Bank." (see Article 142-4 of the Act No. 2005-516, Monetary and Financial Code). The Committee includes, with the exception of the Governor and two Vice-Governors, four members (two members are appointed by the President of the Senate, two members are appointed by the Chairman of the National Assembly). These members are selected according to their competence and their professional experience in finance, economy and monetary affairs. The six members of the Committee are appointed for a term of 6 years and cannot be reappointed.

3.3 Banque de France - European Integration

The European integration is a process that involves political, economic and legislative spheres of countries. These spheres are very often connected together (Bartes, 2018).

In the context of the growing financial globalization, the stability of the financial system has become a priority on the agenda of central banks and international financial institutions (Lukoszová, 2018). That is why many scientific articles deal with the issue of national and commercial banks (Palečková, 2017).

Central banks define money supply, base interest rates; create space for unsecured lending, debt, inflation, risk of massive withdrawals of bank deposits, rescue bankrupt banks contribute to excessive cyclical fluctuations, including financial crises (Horeháj, Šuplata, 2018).

To understand what European monetary policy means today, it is worth recalling the role that the Banque de France has played in this area until the creation of the Central European Bank. This role was further reinforced by the Act of 1993.

The Banque de France, like all central banks, was first an issuing institution – it was at this time her best known function. The Bank was therefore responsible for the introduction of paper money, i.e. of banknotes in circulation, which means that the Bank had the privilege of issue (just remind that paper money – banknotes - have to be distinguished from small coins - species - and especially cashless money, represented by all holding accounts with institutions where a check can be issued).

But the term of an emission institution is in itself simplistic, because what is really important in the economy is, above all, the volume of total payment instruments available to the economy and the monetary policy conducted by the central bank. All central banks move between two pitfalls:

- on the one hand, the bank has to avoid excessive growth in monetary assets, particularly those held by households. To allow these assets grow in a careless way would mean creating conditions for an excess of demand over supply; i.e. support the inflation situation;

- but on the other hand, the bank has to also see to it to avoid the opposite problem - deflation of cash. Today, all western governments have learned lessons from the 1929 crisis, as well as from the mistakes made at that time. Various stock market crises, such as the 1987 crisis, have been overcome thanks to prompt action by central banks, as well as the release of the cash needed by the banks.

Monetary policy aims to control the volume of currency in circulation. In other words, monetary policy aims to control the flow of money. The Banque de France was at the heart of this control system, because one of the essential functions of an issuing institution is to provide the banking system with sufficient cash.

The task assigned to the Banque de France raises a number of problems, which can be seen at the level of the European Central Bank. The first problem is related to the definition, respectively to defining cardinal terms. The central bank controls the movement of the amount of money and thus sets a quantitative monetary objective that may not be overcome. But what is necessary to be understood as currency, or rather money. This rhetorical question is also linked to the problem of the composition of the money supply and the definition of monetary aggregates.

Composition of money supply – Money is an indicator of the purchasing power of economic operators. Money includes payment instruments that can be used to execute various transactions. However, these payment instruments are different; some of them, such as banknotes, metal coins or current account deposits, have immediate liquidity. However, this is no longer the case for other payment instruments, such as interest-bearing deposits of money, i.e. for example passbooks. In other words, in addition to the money itself, there are "quasi money" that are also able to be quickly released and transformed into a transaction tool.

One feature of the present time is the considerable expansion of "quasi money". "Quasi money" is a new financial product whose marketability is immediate; a "quasi money" have gone through significant development. Products offered by undertakings for collective investment also have gone through significant development (e.g. the French OPCVM – Investment Company with Variable Share Capital; so-called SICAV – funds with legal personality; or mutual funds FCP). The diversity of liquidity caused by the existence of cash replacements has led to the definition of monetary aggregates, which are classified according to decreasing liquidity, and which constitutes part of the money supply. The definition of these aggregates presupposes that a boundary will be drawn among different types of financial investments in order to identify those aggregates that represent the supply of funds and those that correspond to the long-term savings effort. However, the problem is that this boundary is variable. This is due to the emergence of new financial products, but also because of the behavior of the savers themselves. In France, a large number of savers used the SICAV as well as interest-bearing accounts. Most of the large countries were therefore forced to redefine monetary aggregates on a regular basis. France did not avoid this necessity and reformed its aggregates several times, especially in 1986 and 1991.

Monetary supply currently consists of four basic aggregates:

- M1: includes payment instruments in the usual sense, i.e. banknotes, species, deposits in current accounts;
- M2: except M1, further includes all savings accounts on current savings books, regardless of form and managing entity (typical of France so - called book A, B, building savings, Codevi, etc.);

- M3: except M1 and M2, it represents term deposits, foreign currency deposits and negotiable securities issued by credit institutions and similar institutions (certificates of deposit and financial corporations). The 1991 reform directly integrated OPCVM (Investment Company with Variable Share Capital) and its short-term securities into this aggregate, thereby emphasizing greater scope and importance;

- M4: includes, except for the foregoing, government bonds as well as treasury bills and mid-term negotiable bonds issued by companies.

Since 1990, the first three aggregates have been joined by the L aggregate (cash = French liquidités), which is also sometimes referred to as the M5 monetary aggregate. This aggregate included, with the exception of treasury bills and commercial securities, industrial savings products. Since 1991 it was divided into two aggregates and it was replaced on one hand by a new M4 aggregate and on the other by a new P aggregate (as investment = i.e. French placement). Nevertheless, it can be noted that the categories and definitions are not entirely identical across countries because of their own particularities (Bouvier, 2016).

The money supply (amount of money) is represented by the M3 aggregate. P aggregates gather various non-monetary financial assets (e.g. investing in life insurance). In summary, the further we move away from M1, the less liquid these assets are.

These changes clearly illustrate the rather unclear boundary between current monetary and non-monetary assets. Global monetary policy requires ongoing monitoring of M-type aggregates, but it also requires monitoring of indicators representing other categories of financial investment.

Regulation tools - The task of monetary policy is to regulate the amount of money in circulation. For this purpose is a privileged instrument in the form of interest rates. Monetary policy is therefore a credit policy regulated through interest rates.

This policy, which was the responsibility of the Banque de France before being incorporated into the European System of Central Banks, had a natural addressee - the banking system. It was the Banque de France, who was the master of the amount of money released.

3.4 Banque de France - Integration Time

The single currency requires a single monetary policy and therefore a delegation of powers in favor of the European System of Central Banks. National authorities have voluntarily abandoned decision-making powers in this area, which can undoubtedly be described as a fundamental change. Therefore, within the essence of the functioning of European monetary policy, it is possible to speak of the centralization of power, however, within the performance of monetary policy factual horizontal de-concentration can be considered. The latter can be demonstrated by the exercising of the various monetary policy measures, which remain lie within the competence of the national central banks, as is moreover provided in the Article 14-3 of the Protocol on the Statute of the European System of Central Banks and of the European Central Bank (national central banks are an integral part of the European System of Central Banks and act in accordance with the intentions and instructions of the European Central Bank. The Governing Council takes the necessary measures to ensure compliance with the intentions and instructions of the European Central Bank and requires a provision of all necessary information).

What are the specific consequences of the delegation of power for the monetary management of the Banque de France. This can be expressed by the following two main points.

Issues of banknotes - First, the Act of 4 August 1993 was adopted, which adopted many provisions of the Act of 3 January 1973, and above all the new Act confirmed the Banque de France monopoly on the issuance of legal tender. However, the article 105A of the Maastricht Treaty constituted the end of that monopoly, since it expressed the nature of the federal system, which distinguished between issuing permits and issues in the strict sense. provides: "The Central Bank is entitled to authorize the issue of banknotes in the Community" (the Article 105A of the Treaty on European Union, Treaty of Maastricht). The competence in this case is therefore exclusive. The article 4 of the Act of 12 May 1998 does not take away the monopoly from the Banque de France to issue legal tender, but extends it to overseas departments (such as Guadelupe or Martinique), but the exercise of that power is subject to the prior approval of the European Central Bank. It should be noted that although the monopoly of issuing does not imply an obligation for the Banque de France to print banknotes which it itself puts into circulation, the Bank still retains its own network of products. This is the exact opposite of the German case where the Bundesbank orders its banknotes from private printing houses.

Monetary policy - In this area, the transfer of monetary sovereignty to the European Union is most evident and the changes that have been made have the most noticeable consequences. The Act of 4 August 1993 conferred on the Monetary Policy Council the right to determine France's monetary policy and subsequent implementation of France's monetary policy was ensured by the Governor of the Banque de France. The Council was independent and had wide powers, such as to assess and oversee the movement of money stocks ;to define and specify the conditions for the use of all monetary policy instruments by the Banque de France; alternatively, to require credit institutions to maintain minimum reserves on accounts with the ECB. Credit policy, interest rates and, after all, the value of the franc were equally in the hands of the Bank's Board and Governor.

Since 1 January 1999, France's monetary policy has been "delegated" to the European level and since this time has fall under the Governing Council of the European Central Bank, which decides on short-term interest rates and bank liquidity in line with the objective of price stability. From now on, the Monetary Policy Council has lost most of its competence.

The article 5 of the Act of 12 May 1998 draws consequences from this new situation by providing that, in the context of the European System of Central Banks, the instructions of the European Central Bank shall be applied in the alternative, after the necessary national modifications have been implemented (e.g. specifying the modalities of intervention in the financial markets, or the nature and extent of the guarantees required).

This was important in case of the information that helped the Governor of the Banque de France, in particular, to justify the requirements for monetary policy regulation, and possibly to limit the effects on the French economy.

4. Conclusion

The aim of the paper was to introduce selected problems in the monetary economy in France and to increase awareness of particular issues falling within the (French) monetary law. The paper has discussed a historical excursion, including the evolution of the legal status and independence of the Banque de France, its current structure, changes and impacts that have been causally linked to its inclusion in the European System of Central Banks. Through this integration, part of France's monetary sovereignty was voluntarily delegated to a supranational organization. This delegation was expressed, inter alia, in the issuance of legal tender and in France's monetary policy in the broader sense. The paper described the impacts of the inclusion

of the Banque de France in the European System of Central Banks that were evident at first sight (e.g. a change in the legal currency or a change in the structure of the Bank). The paper also discussed rather theoretical changes that have an overlap with the practical area of the discipline of monetary economics. This is the case, for example, the aforementioned redefinition of monetary aggregates in France, which was caused partly by the dynamics of the time, respectively natural progression of the time (which is a characteristic common to all countries), partly by other external "pressures" (which may vary from state to state, or may be different in different countries).

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Readmission Agreements as a Tool in Fight against Irregular Migration in the European Union

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Abstract

Migration can be currently considered as one of the most important topics in the European Union. If it is legal and governed, it can pose a great opportunity for the whole European Union in several areas. However, in addition to legal migration, the European Union is still a popular destination for irregular migrants. In case there is an unauthorized entry into the territory of the European Union, one of the instruments used by the European Union is the so-called readmission agreements. These are concluded by the Council of the European Union, which represents the European Union, and third countries. These agreements govern the rules for the return to the country of origin of illegally staying persons on the territory of the European Union. The following study is devoted to their detailed analysis from the perspective of the European Union and third countries.

Keywords: European Union, irregular migration, readmission agreements

JEL Classification: F22, K37, O15

1. Introduction

Migration has played a crucial role in the European Union since the outbreak of migration crisis in year 2015. Legal migration to the European Union can pose a possible solution on problems and crisis, which it has to face nowadays, such as aging of population or lack of labour forces. Although the topic of migration has never been identified as a priority in the Slovak Republic, this trend has change

d in recent years due to different reasons. Machyniak adds that not only in Slovakia, but also in the neighbouring countries, it can be expected that the topic of migration and migration policies applied by the European Union will become one of the central topics for the political and general public (Machyniak, 2018).

The European Union has to face except legal also illegal migration and tries to find the most effective tools in fight against type of migration. Illegal migration is a serious problem in the European Union and according to political representatives of the European Union or member states, there are different types of tools, which are currently used to determine this negative trend. Readmission agreements with third countries are just one of the tools mentioned above. Among other, the European Union uses a so-called voluntary return policy to combat irregular migration, introduces closer and stricter border control (in particular through Frontex), whether it cooperates with third countries which are countries of origin of irregular migrants in the European Union. Migration has become a central issue in the European Union, especially in year 2015, when the number of illegal migrants in the European Union has increased many times. Among other important aspects, these migration waves sparked discussions about the

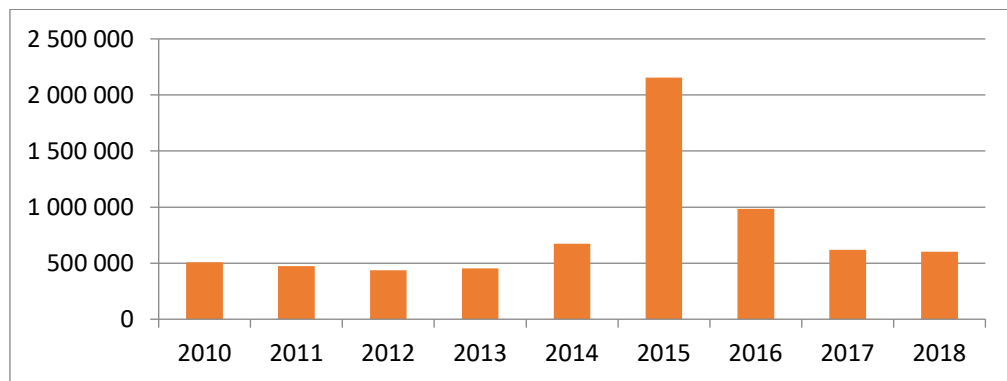
future of Schengen area and divided the Member States of the European Union, as their ideas about resolving the migration crisis were different. Brocková claims that migration crisis has revealed many shortcomings of the Common Asylum System in the European Union (Brocková, 2019). Migration crisis was also abused by many extremist political parties across the European Union, including the Slovak Republic.

Molnár states that European Union law does not explicitly address the issue of expulsion of illegally staying persons in the European Union's territory and therefore this issue should be dealt in readmission agreements signed with third countries (Molnár, 2017). According to different statements of political representatives in the European Union, one of the most effective tool in fight against irregular migration are readmission agreements. Readmission agreements are signed between the European Union and third party, representing countries, which are not member states of the European Union. For a purpose of this article we can call them third countries. Readmission agreements are agreements concluded by the European Union with third countries and their main task is to determine the conditions of return for third-country nationals who are illegally present in the territory of the European Union. Readmission agreements concern only persons who can be identified as being illegally present or staying in the European Union. As part of this definition, it should be noted that these persons have either illegally crossed the borders of the European Union, that means they have crossed the border without valid personal documents, such as passport or ID cards, visas or residence permits, or have remained in the European Union even after the expiry of visas or residence permits. So far, the European Union has signed 17 readmission agreements with third countries (Hong Kong-2004, Maco-2004, Sri Lanka 2005, Albania 2006, Russia-2007, Ukraine-2008, Northern Macedonia-2008, Bosnia and Herzegovina-2008, Montenegro-2008, Serbia-2008, Moldova-2008, Pakistan-2010, Georgia-2011, Armenia-2014, Azerbaijan-2014, Turkey-2014, Cape Verde-2014). Readmission agreements are always concluded bilaterally. They are reciprocal agreements which also give third countries certain benefits for its willingness to cooperate with the European Union in return policy. These benefits can include, for example, visa-free travel and the possibility of later integration into the European Union for countries located in Europe, such as Bosnia and Herzegovina or Serbia. As a member state of the European Union, the Slovak Republic must fully respect the rules laid down in the readmission agreements concluded by the European Union. Although the European Union and also the selected political representatives of the member states, including these ones from the Slovak Republic, argue that readmission agreements are an effective tool in the fight against illegal migration, we see several problems in their direct application that we would like to discuss in this article.

Since readmission agreements are related to the return of persons to countries of origin who are staying illegally in the territory of the European Union, it is necessary to quantify their numbers. It is true that in year 2015 there was an increase in the number of persons from third countries who were illegally present in the European Union, as it is illustrated in the graph below. The migration crisis that reach its peak in year 2015 has a logical explanation. First of all, it was one of the consequences of the turbulent geopolitical situation in the Middle East and North Africa as well. The following chart clearly illustrates the number of illegally migrants from third countries and it is possible to record several trends. Although we can observe a decrease in the total number of illegal migrants in the European Union, especially compared to year 2015, we are still talking about a relatively high figure and, in view of this; it is more than necessary for member states of the European Union to cooperate with each other and also with third countries in the migration policy. In particular, the European Union's cooperation with third countries seems to be one of the most important areas to be addressed

by both parties, but it is questionable whether readmission agreements are the most appropriate solution to this situation or not.

Figure 1: Third Country Nationals Found to be Illegally Present in the Territory of the European Union - Annual data (rounded)



Source: Eurostat (2020)

2. Problems Connected with Readmission Agreements

Readmission agreements, signed by the European Union to eliminate irregular migration on its territory, are often criticized for a number of different reasons. Perhaps they are most criticized because, in some opinions, they address the situation only in the European Union, even at the expense of a real threat to persons who, under readmission agreements, must leave one of the Member States of the European Union. The European Commission, which is given a mandate to negotiate with third countries on the content of readmission agreements, is, according to many opinions, more advantageous than its negotiating partners. The political and economic power at its disposal may thus render the agreements concluded ultimately a manifestation of the not entirely free will of both signatories, but of the concession that the third State will make for the promised political or economic benefits. Criticism of readmission agreements takes various forms, and we will address them more closely in this part of the article.

2.1 Inconsistency between Readmission Agreements and The 1951 Refugee Convention

Readmission agreements on the return of persons to countries of origin have a number of controversial points that cannot be overlooked. Some authors believe that their content is inherently contrary to the rules of international public law for several reasons. The refugee status in terms of international public law has its precise rules and, as certain rights apply, implies his status and duties. The most important document regulating refugee status in international public law is The 1951 Refugee Convention. In addition to a precise definition of who a refugee is, the Convention also lays down certain principles that apply to him or her. One of the main principles that states should apply to refugees in their national territory is the prohibition of expulsion or return, which can be found in Article 33 of The 1951 Convention. This principle in international public law clearly prohibits states from expelling or returning persons to territories where their lives or their liberty would be threatened because of their persecution from racial or religious group, nationality, or because of belonging to a particular social group, or due to political beliefs. It can be unequivocally argued that this is a principle

which is justified in international public law and its main message is to ensure the protection of persons who are in real danger in their countries of origin. The European Union, as a community of countries which, inter alia, upholds the principles of public international law, is of course committed to upholding this principle. However, there can be a serious problem in applying readmission principles. For example, if we look specifically at the readmission agreement signed by the European Union with Turkey in 2014 and taking into account the directions of migration flows, it can be considered as a relatively huge success. However, the agreement itself has from my point of view a number of contentious parts. The 1951 Refugee Convention clearly defines that persons who are in danger in their country of origin cannot be returned to that country. It follows logically that all individuals should be individually assessed before their readmission, with the aim of completely eliminating the risk that they could potentially face. If Member States of the European Union proceed to readmission under, for example, the Readmission Treaty with Turkey that we have analyzed, they must send a request to Turkey. Article 8 of that Readmission Treaty explicitly lists the particulars which a readmission application must contain. Among them we would be vainly looking for the reason or reasons that led to readmission. In view of this, a country, in my case, Turkey, is not in a position to assess whether only those who are staying illegally in the European Union are actually returning back to its territory. Unless there is an individual investigation of all cases, there is a reasonable risk that action against deported persons will be contrary to public international law and The 1951 Refugee Convention.

2.2 Inefficiency of Readmission Agreements

As previously mentioned, the European Union has so far signed 17 readmission agreements. However, persons who remain illegally on the territory of the European Union are returned to their countries of origin also on the basis of agreements other than readmission agreements. Eurostat provides data of persons, who are returned back to their country of origin as well as the type of contracts on the basis of which the process is realized. As the data provided by Eurostat are not compiled for all Member States for recent years 2017 or 2018, the data describing whole European Union could look untrustworthy. With this in mind, we have decided to focus only on one country and we have chosen, Greece. When immigrants use the Eastern Mediterranean route for the transfer to Europe, the vast majority come to Greece. International Organization for Migration states, that Greece due to its position, was the most effected country by the migration crisis in the year 2015. Although number of migrants presented in Greece, has decreased, still it has to face migration waves. According to data provided by Eurostat, 12 490 persons, who were illegally staying in this territory were returned from Greece to third countries in year 2018. Based on the data provided by Eurostat, *the readmission agreements* played only a negligible role as they led to return only of 70 persons to the countries of origin. Eurostat further states that, *under another readmission agreement*, 15 persons were returned from Greece to third countries and 12 405 persons left Greece *on the basis of an unknown agreement*, which is not specified by Eurostat (according to Eurostat *unknown agreement*).

The statistics published by Eurostat on the number of persons returned from the territory of the European Union to third countries are not accurate. Many countries are completely missing from the databases or the data provided is incomplete. For example, Poland provides completed data. Based on data published by Eurostat, a total of 22 165 persons were returned from Poland to the countries of origin in 2017. Under the *readmission agreement* signed by the European Union 590 persons were returned, 135 under *another readmission agreement* and 21 435 persons were returned to countries of origin based on *unknown agreement*.

2.3 Readmission Agreement between the European Union and Pakistan

One of the most controversial readmission agreement was concluded with Pakistan. Claire Rodier referred in year 2009 to this agreement and pointed on some controversial, which have occurred during negotiations (Rodier, 2009). Rodier mentioned economic power, which the European Union has used during negotiations with this country and has given it an advantage in compare with its partner. As it was already mentioned above, Pakistan has signed a readmission agreement with the European Union in year 2010. For understandable reasons, it was preceded by negotiations on the content of the agreement. In year 2005, both sides decided to sign a so-called Cooperation Agreement, in which Pakistan also undertook to sign a Readmission Agreement with the European Union in the future. The Cooperation Agreement, which was signed between Pakistan and the European Union, encompassed various areas in which both parties have committed themselves to mutual cooperation. If we compare background of the Cooperation Agreement and mutual trade between the European Union and Pakistan, we can observe a relatively big independence of Pakistan on the European Union. This statement is clearly confirmed by following data. The trade was particularly interesting from Pakistan's point of view, as up to 30% of Pakistan's exports went to the European Union at this time. Nor was the value of imports coming from the European Union to Pakistan negligible. Given the socio-economic barriers that hindered Pakistan's economic growth, it was also a major recipient of financial aid (development aid) from the European Union in Asia. At the time of negotiations between these two parties (2002-2006), the European Union planned to support Pakistan with an amount of approximately €164 million (Rodier, 2009).

The Readmission Agreement signed between the European Union and Pakistan finally entered into force in year 2010 and the first problems related to its fairness emerged five years later in year 2015. The Pakistani government in that year decided to temporarily suspend the readmission agreement it had signed with the European Union. It is interesting to note that the Government of Pakistan decided to suspend the Readmission Agreement against all Member States of the European Union except the United Kingdom of Great Britain and Northern Ireland. Former Pakistan Interior Minister Nisar Ali Khan defended the decision to withdraw Pakistan from the Readmission Agreement on the grounds that the approach taken by the Member States of the European Union towards the citizens of Pakistan is unlawful and will not be respected by the Pakistan. According to Khan, the readmission agreement has several issues. One of them was that, under the agreement, Pakistan had the right to verify the situation when it readmitted its citizens and only after confirming that they were in fact eligible readmission to deport them from the European Union to Pakistan. Based on the statements of Pakistani Government, however, such steps were not taken and this ultimately resulted in mass deported persons to Pakistan who did not pass a fair assessment of the situation. Many times, these people have been identified as potential terrorists, but this has not been proven, according to the Pakistani Government.

3. Conclusion

Readmission agreements concluded by the European Union with third countries are, according to the representatives of the European Union, an effective tool in the fight against irregular migration. There is no doubt that it is a suitable tool to eliminate this negative trend, but in practice it has several shortages. In my point of view, their biggest shortcoming is the real threat that those who are at risk of being threatened due to their race, religion, political beliefs or belonging to a particular social group will be put at risk in their country of origin. If such a situation occurs, it does constitute a gross breach of the principles of public international law. Another problem associated with readmission agreements is their relatively lack. The European Union has so far been able to conclude 17 readmission agreements, and given the

migration flows to the European Union, it is more than necessary to increase the number of such agreements, especially with countries whose citizens arrive illegally in its territory in larger numbers. It is also necessary for the European Union to show more willingness in negotiations with third countries and to be prepared to offer certain benefits to third countries. Finally, it should be added that readmission agreements are just one of the tools used by the European Union to combat illegal migration. Cooperation between Member States in this area is very important and should, inter alia, take place in the reform of the Common European Asylum System. As Brocková claims reform of the asylum system in the European Union would contribute to greater transparency in the asylum process and, in addition to ensuring protection for refugees, would also contribute to a higher level of security in European Union (Brocková, 2019).

On the other hand, it is important to stress the importance of the agreements themselves. Indeed, if concluded by the European Union with the best possible intentions, they can indeed contribute to resolving the problem of illegal migration in that territory. In this area, we would like to disagree with Ganoczy, who claims that migration and asylum policy should be managed at national rather than European level (Ganoczy, 2018). Firstly, it is important to say that this is a shared competence of the European Union and the Member States. Similarly, if we compare the position of the European Union in negotiations with that of Slovakia, for example, it can be stated that the European Union is able to negotiate a better conditions. Equally, the principle of solidarity must be taken into account, not forgetting that countries of varying intensity are affected by migration flows, but that does not mean that this problem does not concern other Member States.

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Minimum Wage versus Social Benefits in the Czech Republic

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Abstract

The minimum wage has received a significant amount of attention in 2020 from high-level European Union politicians. Efforts are being made to promote a uniform methodology for the setting of the minimum wage in the European Union. This step represents a major intrusion into the sovereignty of individual Member States and their fiscal policies. The widening of the gap between the minimum wage and state-guaranteed income (social benefits) constitutes an important motivational factor for the effective functioning of a country's labour market. This paper compares the structures of this system in the Czech Republic, Germany and France. The comparison includes the monitoring of the amount of the minimum wage in relation to social benefits (the living wage instrument) and their relative anchoring with respect to price levels and the purchasing power standard.

Keywords: average gross wage, living minimum, minimum wage, purchasing power standard, social benefits

JEL Classification: D14, H53, I31, I38

1. Introduction

The minimum wage has various definitions according to the relevant national legislation and the theoretical economic concepts adopted (Borjas, 2019). In developed countries, however, the concept of minimum wages is based on a generally accepted definition (including the purpose thereof) according to the International Labour Organization: “Minimum wages have been defined as “the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract. The purpose of minimum wages is to protect workers against unduly low pay. They help ensure a just and equitable share of the fruits of progress to all, and a minimum living wage to all who are employed and in need of such protection. Minimum wages can also be one element of a policy to overcome poverty and reduce inequality, including those between men and women, by promoting the right to equal remuneration for work of equal value.”

Since the minimum wage faces “competition” from social benefits, it is also necessary to define the basic component of social benefits, i.e. the living minimum. While the way in which state assistance is guaranteed varies considerably from one country to another, the living minimum is adapted to the economic conditions of the national economy of the given state and is determined on the basis of political consensus that subsequently results in a legislative standard.

In developed countries, the living minimum instrument is seen as the provision of assistance that, in addition to satisfying a person's basic physiological needs, provides the opportunity to participate in social and economic life. This allows persons (and families) to maintain social

ties and not to fall into deep material deprivation, which could subsequently lead to social exclusion. As Mareš and Sirovátka (2008) point out, long-term experience of social exclusion leads to the creation of a culture of poverty for such persons. However, the inability of excluded persons to participate effectively in the economic, political, cultural and social life of society represents a risk both to the person him/herself and society as a whole.

In early 2020, the European Commission announced its intention to introduce a European minimum wage. While the calculation of the minimum wage will follow the same principles, it will be adapted to the situations of individual countries (Eurofound, 2020). The aim of this paper is, therefore, to examine the potential for the establishment of a uniform methodology for the calculation of a European minimum wage. The economic value of the creation of a European minimum wage is examined with respect to the Czech Republic in relation to the situations in France and Germany. While the Czech Republic can be considered a representative of countries that acceded to the EU in and after 2004, France and Germany were selected as representatives of the original founding nations of the organisation and members of the original so-called EU-15. France and Germany are not only economically strong; they are also important from the demographic and geographical points of view and largely shape the political form of the European Union. If we want to see the harmonisation of the European Union, it is necessary to compare those countries that acceded in and after 2004 with the strongest and most stable members of the organisation.

2. Problem Formulation and Methodology

Surprisingly, the academic literature has little to say about this simple but fundamental question; indeed there is no clear answer to the question of how to set the minimum wage. Partial answers can be found in articles by authors who publish under the umbrella of the International Labour Organisation. For example, Belser and Sobeck (2012) attempted to determine the appropriate minimum wage level for individual countries on the basis of economic indicators that may change over time. They acknowledged the substantial influence exerted by politicians with respect to the approach to this issue. Schulten (2012) outlines a European minimum wage concept that relies on the non-payment of equitable wages. Although the European Social Charter of the Council of Europe set out in 1961 that all employees should be entitled to a decent standard of living, by 2010, however, only 5 countries (France, Malta, Denmark, Norway and Sweden) had managed to fulfil the requirements of this concept.

Other authors not involved with the International Labour Organisation such as Fanti and Gori (2011) and Irmen and Wigger (2002, 2006) have also addressed the relationship between the minimum wage and economic growth taking into account wages negotiated by trade unions. And, despite Adema, Giesing, Schönauer and Sitteneder (2019) addressing the existence of the minimum wage and the reasons for its creation in individual countries worldwide, no solution has yet been found to the global fragmentation of the issue of the minimum wage.

As far as the Czech Republic is concerned, the issue of the setting of the minimum wage has been considered by experts from the Research Institute for Labour and Social Affairs and authors such as Pernica (2017) who concluded that the minimum wage in 2016 did not correspond either to the level of gross domestic product per capita at the purchasing power standard or to real labour productivity per employee in other EU countries.

The above-mentioned authors, however, have not addressed the question of the ideal ratio between the minimum wage and the living minimum even though the interaction between

the minimum wage and the living minimum fundamentally affects the effective allocation of the labour market.

The European Commission is addressing the issue of a European minimum wage since individual Member States, due to a raft of economic variables, are experiencing problems with the functioning of their labour markets and the resulting consequences for the whole of the economy. While the minimum wage is set at different amounts in Member States, they generally correspond to the level of the living minimum needed for survival. As a result, the living minimum, including other social benefits, is exerting a demotivating effect on the labour market. Other complications are linked to the phenomenon of working poverty (Czech statistical office, 2014). Both problems are particularly relevant to those Member States that acceded to the EU in or after 2004. Moreover, further complications can be expected in all EU labour markets due to ongoing automation and robotisation (Industry 4.0). In addition, it is important to consider the ageing of the population throughout the European Union and the consequent contraction of the labour force, the structure of the labour market and the levels of expertise required, the minimum wage in relation to employer wage costs, etc.

2.1. Methodology

The political economy approach has been employed in this paper. The importance of the political economy rests in its ability to cover important social, political and economic phenomena and their mutual relationships. The minimum wage, average wage and living minimum are compared for selected countries over the period 2016 to 2018 and the incomes provided are correlated with the price levels in the relevant country (and the European Union). Employing Eurostat data (2020a), we also employ a comparison of household consumption with concern to three basic human survival needs (food, clothing and housing) which must be covered by households that are in receipt of income corresponding to the minimum wage level.

Although, as mentioned above, most countries have adopted the International Labour Organisation minimum wage definition, differences are apparent in terms of the interpretation of this definition. Therefore, an example is provided here of the definition of the minimum wage adopted by Czech legislation as set out in the Labour Code (Act 262/2006 Coll.): *“The minimum wage shall be the minimum permissible amount of remuneration for work performed within a basic labour relationship. The wage, salary or remuneration pursuant to an agreement may not be lower than the minimum wage. For this purpose, the wage or salary shall not include any premium payment for overtime, work on public holidays, night work, work in arduous working environments and for work on Saturdays and/or on Sundays.”* (The Ministry of Labour and Social Affairs, 2020)

It should be noted that the living minimum instrument does not include housing benefits, which are covered by other social benefits (in every selected countries). Likewise, the article does not reflect the option of living in social housing, which works extensively in France or Germany while in the Czech Republic almost does not exist.

3. Problem Solution

Both welfare and state intervention system instruments related to the modification of the income of individuals and households should be revised over time according to the development of price and external conditions (Saunders, Bedford, 2018; O'Connor, 2018). Table 1 shows the degree of variance between the safety net in the form of the living minimum and remuneration for work in the form of the minimum wage and average wage in the selected

countries in the period 2016 – 2018. Amounts are given both in absolute terms and multiples of the living minimum (for quicker comparisons between countries and years).

Table 1: Living Minimum Compared to Minimum and Average Wages (2016-2018, €)

Czech Republic **	2016		2017		2018	
Living minimum*	126.14	-	129.53	-	132.96	-
Minimum wage	366.21	2.9 ^x LM	417.84	3.2 ^x LM	475.69	3.6 ^x LM
Average gross earnings*	1 031.75	8.2 ^x LM	1 131.27	8.7 ^x LM	1 248.73	9.4 ^x LM
Average net earnings*	787.45	6.2 ^x LM	858.07	6.6 ^x LM	941.09	7.1 ^x LM
Germany	2016		2017		2018	
Living minimum*	404.00	-	409.00	-	416.00	-
Minimum wage	1 440.00	3.6 ^x LM	1 498.00	3.7 ^x LM	1 498.00	3.6 ^x LM
Average gross earnings*	4 025.00	10.0 ^x LM	4 091.67	10.0 ^x LM	4 225.00	10.2 ^x LM
Average net earnings*	2 423.47	6.0 ^x LM	2 463.56	6.0 ^x LM	2 545.64	6.1 ^x LM
France ***	2016		2017		2018	
Living minimum*	535.17	-	545.48	-	550.93	-
Minimum wage	1 466.62	2.7 ^x LM	1 480.27	2.7 ^x LM	1 498.47	2.7 ^x LM
Average gross earnings*	3 162.16	5.9 ^x LM	3 217.23	5.9 ^x LM	3 275.68	5.9 ^x LM
Average net earnings*	2 243.37	4.2 ^x LM	2 277.77	4.2 ^x LM	2 336.47	4.2 ^x LM

Note: LM = living minimum

** Data is provided for a person living in a single household without children; income is 100% of the average wage.*

*** There was no change in the living minimum in the Czech Republic in the period under review. The increase in the living minimum is the result of exchange rate changes (Eurostat, 2020b)*

**** In France, as a rule, the amount of the living minimum is adjusted three times per year; therefore, only the final values valid for the given year are provided.*

Source: Authors, based on Ministry of Labour and Social Affairs (2013), European Commission (2020a,b) and Eurostat (2020c,d)

It is essential that working pays off. By definition, the minimum wage must be able to provide for more than just an individual's (household's) basic physiological needs. France has the most generous system; moreover, the difference between the minimum wage and the living

minimum in France is the smallest (2.7 times) of the three countries compared. On the other hand, the lowest level of support is provided in the Czech Republic, where the state-guaranteed social benefit stands at approximately EUR 130. Based on the above comparison of current variables, it can be concluded that the Czech Republic does not compare unfavourably with either Germany or France. It is important to note, that the increase of the minimum wage in 2016 – 2018 was due only to changes in the CZK / EUR exchange rate. Throughout the history of the institute of the living minimum, since its introduction in 2007 (EUR 112.58), it has been increased only once in 2012 (EUR 135.59). The second important fact is that the values of the minimum wage, compared to the living minimum, have been actually changed. However, the growth rate of the minimum wage is not sufficient to increase average wages or to increase the price level in the Czech Republic. The state thus subsidizes employers (distorts the labour market) in the form of paid social benefits to individuals working around the value of the institute minimum wage. The basic definition of the minimum wage is therefore denied. The last, no less important aspect is the increase in the difference between the minimum wage and the living minimum. It would seem that the scissors are opening in the spirit of healthy motivation to work; but it is not in the case of the Czech Republic. Indeed, neither of the values of the above-mentioned institutes fully satisfies their function; the objectives pursued by the state have not met - the living minimum is not sufficient to maintain social contacts and healthy social habits; the minimum wage is not sufficient for an acceptable modest standard of living without the need for dependence on the social benefit system in the Czech Republic.

Table 1 also highlights the effect of a further important element in public systems, i.e. the average income taxation level is highest in Germany, with average gross earnings of 10 times the living minimum, and average net earnings of just 6 times. An important aspect of the comparison should be an assessment of what the state provides to citizens for the taxation, to what extent and in what quality. However, this evaluation is not the aim of this article. In this case, the values of average wage show correlation with the values of the living minimum and minimum wage in the economy.

Moreover, price levels, which were elaborated by Beran and Godarová (2019), also play an important role. The Czech Republic has an overall price index lower than the EU-28 average (the Czech Republic 71, Germany 104, France 110), however, when we decompose this indicator, we see the burden on the individual's basic needs with higher prices than the Czech average (Food and non-alcoholic beverages 84, Clothing and footwear 100). Hand in hand for comprehensive system setup, we must also monitor the composition of household consumption. In the Czech Republic, the average household spend around 50% of their budget for consumption of primary goods – food, clothing and housing; for low income households this percentage is even higher. Low incomes combined with high prices for necessary goods lead to the displacement of the consumption of services (such as education and health) which, over the long term, may worsen the position of those persons and families most affected.

As a result, those most motivated to work are persons claiming social benefits in Germany and those least motivated are social benefit claimants in the Czech Republic.

4. Conclusion

The economically rational setting of the minimum wage instrument is beneficial for employees, employers and the state. The setting of the minimum wage is aimed at ensuring the protection of employees from working poverty. Moreover, it should motivate employees to work and provide them and their families with a better standard of living than that ensured by social benefits.

The minimum wage prevents employers from illegally competing with each other in the form of dumping labour costs and ensures that minimum wage costs are incurred by all employers at the same level. At the same time, it protects employers from allegations that they pay their employees insufficient remuneration since they are forced to accept the minimum wage by the fiscal authority. In essence, employers are satisfied with the existence of the minimum wage since, provided they comply with legislation, the fiscal authority is seen as being responsible for low wage levels in the economy.

The state, as the last of the afore-mentioned labour market players, reaps advantages in terms of both the revenue and expenditure components of the state budget. By maintaining the minimum wage in line with price and wage movements, it supports the widening of the gap between income from work and social benefits. The state spends less on social benefits and profits from increased revenue from taxes and social security and health insurance contributions.

The amounts of the average gross and net wages, minimum wages and living minima for France (minimum wage 1 498.47 EUR, Living minimum 550.93 EUR) and Germany (minimum wage 1 498.00 EUR, living minimum 416.00 EUR) clearly show in chapter 3 how these countries are economically aligned; they are experiencing real convergence. With respect to the same variables in the Czech Republic (minimum wage 475.69 EUR, living minimum 132.96 EUR), it is possible to confirm that the convergence process is not advancing at the same pace nor in the same manner as in the case of France and Germany. Moreover, neither the living minimum nor the minimum wage fulfills their basic functions in the Czech Republic.

The setting of the European minimum wage at too high a level will lead to conflict from the side of employers and, with respect to some economically weaker countries, it could even result in capital transfers across the European Union. It would be a shock that would mainly affect those countries of the European Union that have, to date, offered only cheap labour due to the existence of non-tradable goods (services). In other words, their convergence has been neither nominal nor real. Moreover, it would not only exert an impact on individual national labour markets, but would also result in consequences at the local level, especially in regions with long-term structural problems. It is not known whether the European Commission will propose the payment of compensation; however, if compensation is provided through European funds, it will further distort the economies of those states that are entitled to claim such funding.

While the setting of the European minimum wage at a low level will avoid the potential conflicts outlined above, it will result in the minimum wage instrument representing no more than a common political construct that will not ultimately solve the problems of individual European Union countries. Although it will indicate social reconciliation between Member States, it must be assumed that the European minimum wage will help neither the poorer nor the richer countries of the European Union. It will lead to the implementation of further common legislation that will represent a step forward in terms of the harmonisation of the legal systems of Member States, in which case the implementation of such legislation would make sense if it advances the convergence process and all the economies involved benefit from it. However, the worst possible option involves the creation of a common legislative framework with a series of country-specific exemptions.

It is safe to state that the European minimum wage will be set favourably with respect to the economic interests of the politically and economically strong countries of the EU (the pre-2004 accession states). However, how these regulations will work in practice and help the economy of the Czech Republic, when the basic Czech labour market variables relate principally to other economic factors, is difficult to identify. Moreover, the other countries that

acceded to the EU in or after 2004 will be in a similar situation. Thus, it is important that future developments and the impacts of changes in this respect should be carefully monitored through further research.

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The Influence of Cryptocurrencies on the Global Economy and Their Importance from the Accounting and Tax Point of View

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Abstract

The paper deals with the specific and currently topical issue of cryptocurrencies from various perspectives. The aim of this paper is not only to monitor the impact of cryptocurrencies on the global economy but also to characterize cryptocurrencies, including their properties and functions. It also addresses opinions and controversy in understanding and capturing cryptocurrencies as money between their supporters and central authorities. Furthermore, it provides information on their valuation, accounting and taxation as it follows from the legislation of the Czech Republic as well as from the IAS/IFRS, including differences between the two. Since the popularity of cryptocurrencies has been growing lately, not only countries but also international and supranational institutions are beginning to pay more attention to cryptocurrency accounting and taxation issues. Given the growing popularity of cryptocurrencies today, it is necessary to support their positive understanding and benefits for the global economy within the EU.

Keywords: accounting, cryptocurrency, cryptocurrency taxation, global economy

JEL Classification: M21, M41, K34

1. Introduction

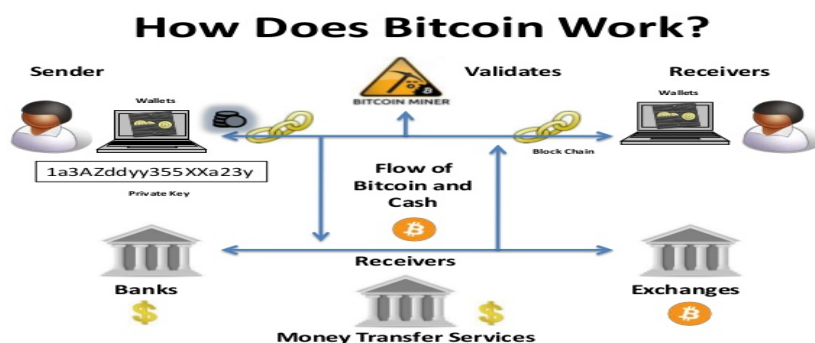
The aim of this paper is not only to monitor the impact of cryptocurrencies on the global economy but also to characterize cryptocurrencies, including their properties and functions. It also addresses opinions and controversy in understanding and capturing cryptocurrencies as money between their supporters and central authorities. Furthermore, it provides information on their valuation, accounting and taxation as it follows from the legislation of the Czech Republic as well as from the international perspective of International Financial Reporting Standards (hereafter only IAS/IFRS), including differences between the two. The development of new technologies supported by advanced encryption and network programming has a significant impact on transformational changes in the world economy. One of the important elements of this development is the emergence and rapid progress of so-called virtual currencies and after that cryptocurrencies, which have experienced a significant boom in recent years (Tschorsch, 2016). At the moment, there are over 1,500 types of such currencies. The main motive for their use is maintaining the anonymity of the holder, but in the context of current legislative requirements, the anonymity is gradually disappearing. Cryptocurrency transactions have tax implications (what transactions with cryptocurrencies, when and how to tax them), criminal (their use for illegal activities) or ethical ones (energy consumption) (Irwin, A., 2019). Although cryptocurrencies have been on the market since 2009, no national or even supranational legislation haven't regulated the way of their valuation, accounting, reporting

and taxation so far (Ram, A., 2018). International Monetary Fund (hereafter only IMF) recognizes the following categories of currencies in the electronic environment:

- Digital currency-real currencies in bank accounts or electronic money that is denominated in a real, regulated currency issued by the central bank.
- Virtual currency-electronic money issued by a private entity, i.e., unregulated currency (such as miles of airlines or vouchers applicable to internet payments). These are usually non-convertible for real currency or only unilaterally convertible.
- Cryptocurrency - is a type of digital currency or electronic money, which relies on asymmetric cryptography, i.e., encryption, for chaining digital signatures of individual transfers, peer-to-peer networks and decentralization. From the concept of conventional money, it mainly differs in the absence of central authority (Čížek, 2018).

Virtual currency is a digital internet currency, which is based on a complex cryptographic mathematical algorithm and can be used as a means of exchanging goods and services in on-line trading (Inshyn, 2018) as shown in Figure 1. The virtual currency is also called digital currency, or cryptocurrency. The first cryptocurrency that started trading was Bitcoin in 2009; Satoshi Nakamoto is considered its author (Nakamoto, 2008). The uniqueness of Bitcoin lies in its complete decentralization. It has been designed so that no one can influence the currency artificially or falsify it, and so that it is not possible to control the flow of money or cause inflation. Bitcoin is not issued by any bank, but it needs to be "mined" (Berentsen, 2018).

Figure 1: How does bitcoin work?

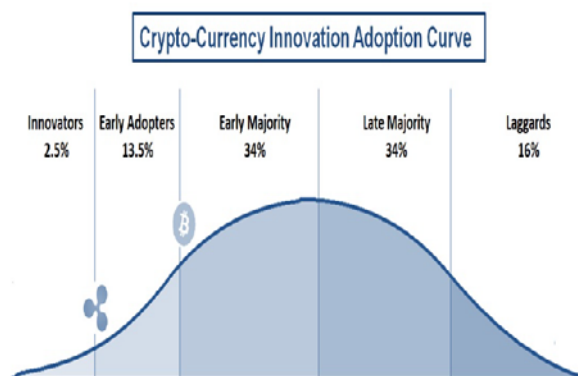


Source: (Quora: What is Bitcoin and how does it work? Is it legal? Who's behind it? [online], 2018)

Bitcoin is far from being the only cryptocurrency on the market today (Borri, 2019). Many other groups have been inspired by the idea of decentralized digital currency and created a variety of different technologies. The biggest cryptocurrencies include Ripple, a payment system similar to PayPal, that allows payment in different currencies (Jagtiani, 2019). Ripple is controlled by one company which also owns more than 60 percent of Ripple cryptocurrencies. On the other hand, systems that meet the traditional definition of a cryptocurrency include Litecoin, Ethereum, Monera, Dash or Zcash. Cryptocurrencies are divided into two basic groups: those derived from Bitcoin and those derived from Litecoin, also called Altcoins. Converted to fiat currency, cryptocurrencies have a variable value over time and are not associated with any physical form of money (Čížek, 2018). Given the difficulty of entering investors in the cryptocurrency market in combination with the relatively recently created and

distributed cryptographic currency, the innovation curve of a cryptocurrency can be illustrated by the Figure 2.

Figure 2: Crypto-Currency Innovation Adoption Curve



Source: (XRP: The Digital Asset for Mainstream Investors [online], 2017)

The basic criteria for a successful cryptocurrency include: resistance to attacks and theft (i.e. a complex mathematics), ease of use in practice and understandable to the user, decentralized x centralized, providing users with anonymity but unusable for illegal activities, having the characteristics of money and fulfilling its functions, allowing for currency comparison (Ammous, 2018).

2. Problem Formulation and Methodology

Methods used in this paper match its content and focus. This is primarily the method of description. A dialectical benefit, for which each phenomenon can be understood as a part of the whole, can be considered as a methodological basis. Individual economic categories and economic phenomena are not examined in isolation but are based on principles of integrity of economic phenomena and the principle of dialectical unity. Furthermore, the method of procedure was used, which comes from simple categories to their increasingly complex determination, to their mutual relations. The methods of analysis and comparison were also used. The findings are summarized using the method of synthesis and scientific explanation.

3. Problem Solution

The cryptocurrency accounting is analysed from the perspective of:

- Czech accounting legislation,
- International Financial Reporting Standards (IAS/IFRS).

As for the Czech legislation (primarily the Act No. 561/1993 Sb., on Accounting and implementing Decree No. 500/2002 Sb.), the issue is defined rather broadly (Hakalová, 2018). The Ministry of Finance of the Czech Republic published on May 15, 2018 an opinion on digital currency accounting and presentation (Sdělení k účtování a vykazování digitálních měn), and according to this opinion, digital currencies should be accounted for and reported as inventories uniformly even though there are different motives for holding and using digital currencies (Caginalp, 2018). Furthermore, the understanding of digital currencies as intangible

assets is being discussed by the public which is also reflected in IAS/IFRS (Hakalová, 2014). Some views on the reporting of digital currencies also refer to the understanding of digital currencies as a monetary instrument, but this understanding cannot be considered as correct under Czech legislation nor under IAS/IFRS. From the perspective of IAS/IFRS, digital currencies cannot be understood as a financial asset as they fail to meet the definition. (Corbet, 2018) Under IFRS, digital currencies can be reported as inventories or intangible assets (Čížek, 2018). Another issue associated with digital currencies is their valuation (Nakamoto, 2018). Under Czech legislation, the initial valuation is based on the Act on Accounting, section 25 (1), using the acquisition cost. In case of subsequent valuation (at the end of the balance sheet date) at fair value and the revaluation to the profit or loss, a problem occurs as under the Czech legislation inventories cannot be revalued at fair value. This is possible for inventories under IFRS, but only in case of a trader or commodity broker (Vašíček, 2019). Currently, there are about 5 % of companies in the Czech Republic that include cryptocurrencies in their accounts. Compared to foreign countries, it can be stated that in terms of using cryptocurrencies, we are among the progressive countries of Central Europe. “When choosing an appropriate accounting policy, it is necessary to consider the position of the entity that makes it and the purpose of making it, and a thorough analysis of the existing rules to find the most appropriate solution,” says Libor Vašek, chairman of the Chamber of Certified Accountants, and adds that at the present the best solution is to treat cryptocurrencies as inventories (Čížek, 2018).

In terms of taxation, cryptocurrencies are considered to be an intangible, movable and fungible thing. The tax administrator also bases this opinion on the Czech National Bank's statement that it is not a means of payment or electronic money. A golden rule for cryptocurrencies is that “as it is entered into accounts, so it is taxed” (Čížek, 2018).

The subject of income tax under the Act No. 586/1992 Sb., on Income Tax, include not only the exchange of cryptocurrencies for fiat currency, but also the exchange of cryptocurrency for another currency. The next step of the taxation then depends on whether it is a one-time or regular income and whether the entity includes cryptocurrency in its business, or if it only appreciates its assets in this way as an individual who is not an entrepreneur. A purchase of goods for cryptocurrencies is also subject to the tax. Pursuant to section 3 (2) of the Act on Income Tax, this is a non-monetary income, so it is necessary to determine the value of purchased goods which will be subsequently taxed. If individuals – non-entrepreneurs-trade with cryptocurrencies, their income is taxed as so-called other income under section 10. The tax base is so the income from the sale of bitcoins reduced by the expenses incurred to generate the incomes (such as purchase of bitcoins or electricity consumption for mining). For incomes pursuant to section 10 it is possible to compensate for profits with losses only within one type of incomes. This ensures that the taxpayer cannot reduce the total tax liability (of income from employment or business) by reporting a loss due to cryptocurrency trading. In this case, the exemption of such incomes from the tax at the amount of 30,000 CZK per year cannot be applied, as described in section 10 (3) (a) of the Act on Income Tax. The exemption under section 4 (1) (x) of the Act on Income Tax cannot be also applied; the section describes a time test, which states that the sale of securities is exempt from tax if the period between acquisition and sale exceeds three years. In this context, the General Financial Directorate notes that cryptocurrencies are not securities and therefore this exemption cannot be applied.

If a cryptocurrency is traded by individuals – entrepreneurs, who does not keep accounts but keep tax records or claims lump sum expenses, then it is the monetization of the bitcoins that is considered to be a taxable income, not the “yield” from mining bitcoins. Allowable expenses are then all expenses that were substantiated or claimed as lump sum expenses. If transactions within the entity's assets are carried out with cryptocurrencies, they are considered as income from self-employment. However, if individuals only manage their own funds by purchasing and selling cryptocurrencies, they do not need a trade license for such activity since the activity does not meet the definition of a trade. But if individuals engage in cryptocurrency mining, it is a activity of providing services for which a trade license is needed. Determining expenses incurred to generate, assure and maintain the income might be an issue due to the fact that every bitcoin or any other cryptocurrency were purchased at a different price.

There are two options for determining the expenses (Gregoriou, 2019). The first option is to apply the FIFO method (First in First out), where the purchase cost can be used as the purchase of cryptocurrencies occurred. Cryptocurrencies that are held for the longest time are issued at the cost of their purchase. The second option is to use the weighted average method. In this case, the average value for which all the currently held cryptocurrencies have been purchased is calculated and the cryptocurrencies will be issued at their average value. The cryptocurrency legislation is more sophisticated in the area of value added tax as the Act on Value Added Tax has been harmonized across the European Union (Luther, 2015). The exchange of cryptocurrencies is subject to the value added tax because it is providing a service of an exchange in return for a payment. Such activity can be, however, classified as a financial activity which is an exempted transaction without the right to deduct a tax. The mining of cryptocurrency alone is an activity which is not subject to the value added tax. This is based on the opinion of the Court of Justice of the European Union according to which the subject of value added tax is involved where there is a clear link between the service provided and the payment received. The mining of cryptocurrencies often ends without any result, and receiving a reward for such activity is purely coincidental. As of July 1, 2017, cryptocurrencies.

4 Conclusion

Cryptocurrency creators and supporters often state that the current monetary system is not stable, and that it is dominated by central authorities, which do not always follow the interests of money owners, and that the money has no backing. The monetary policy of a central authority is, in their opinion, inflationary and causes a constant decline in the value of money. They offer two approaches which will bring more currency stability:

- Deflation policy-a pre-limited amount given by a known algorithm (such as bitcoin).
- Inflation policy-a growing money supply without limits (a predetermined growth algorithm or an ad hoc approach in the style of today's central banks).

Both approaches have their advantages and disadvantages, but the important thing is whether the policy chosen will allow a long-term and stable environment. Will the money supply be sufficient with deflation policy, and will it not eventually hinder economic growth? How will inflation policy respond to random shocks and potential crises? And above all, how will the security and independence of the system be ensured? Will there be a possibility for a public control to prevent taking control over the system by an interest group? If cryptocurrencies are to be introduced by a central bank, the fundamental question is what cryptocurrency model will be chosen – this will define the monetary policy as well as the possibility of using central bank instruments. In case of cryptocurrencies created outside the central bank, the question is whether it will be possible to provide loans in the cryptocurrency and so allowing for money supply to be created through multiplication of deposits. This is not yet possible; each unit of

cryptocurrency has its owner who is recorded in blockchain, so there is no multiplication and money creation. According to an IMF study, the current market value of virtual names is approximately 7 billion USD, while there are 1.4 trillion USD in cash are in circulation and the total money supply (M2) is approximately 12 trillion USD. With 90 %, bitcoin has the most significant share in the total market value of virtual currencies (Luther, 2015). According to this study, virtual currencies are not currently significant for monetary policy of central banks (Cernak, 2017). The situation may, however, change if there is a wider use of these currencies. Due to their limited supply, they may cause structural deflation in a similar way as it happened with the gold standard. A possible increase in the use of cryptocurrencies compared to the use of money issued by standard central banks may result in weakening the ability of a central bank to manage economic cycles through monetary policy (Phillip, 2018). Bitcoin price (BTC) fell by more than 80% last year. Prices of other cryptocurrencies have also fallen significantly, in some cases even by 99%. According to some analyses, the digital asset market could finally be ready for a bull rally (a market growth). Willy Woo, a prominent researcher and crypto analyst, recently announced that digital asset transactions on the blockchain network were too small for asset prices to recover soon. In May 2018, Woo accurately predicted that the price of BTC would fall below 6,000 USD even before any sign of market recovery. At the moment, he claims that the high volatility of recent weeks has led to an increase in cryptocurrency volume on the blockchain (Boon Seng Tan, 2017). The IMF reports that central banks could respond to the growing demand for cryptocurrencies by creating their own cryptocurrencies. These would be guaranteed by the relevant central banks as issuers, meeting the most important cryptocurrency advantage, namely direct peer-to-peer payments. The study mentions, as an example, the Fedcoin, a cryptocurrency eventually issued by the Fed and converted to parity with the US dollar. The total amount of Fedcoin issued, unlike bitcoins for which the quantity is fixed, would depend on consumer demands, similarly to the money in circulation (Dierksmeier, 2018). Fedcoins would so become the third component of the monetary base, in addition to currency and reserves. They would not be a competitive alternative to a real currency as it is with bitcoin, but an alternative to a valid currency in electronic form.

Based on an analysis of cryptocurrency knowledge, we conclude that significant progress in own cryptocurrency study was done by Sveriges Riksbank with the Ekron project which is to be prepared in 2019. By the end of 2016, more than 50% of the Swedish population installed an application in their mobile phone which allows the transfer of funds (legal currency) with immediate execution - a transfer (Platanakis, 2018). The demand for a currency in circulation is declining significantly in the country, and some shops and banks does not even accept cash payments. Such development, however, raises concerns whether an economy without almost any currency in circulation, can function effectively (Raiborn, 2015). If in the future the central banks proceed with creating their own electronic currency, a significant part of the cost of emission and cash management, which in developed countries amounts to 1 to 2% of GDP, would be eliminated. On the other hand, the central banks would have to cope with the anonymity provided by cryptocurrencies at a time when issuance of banknotes in higher denominations is being abandoned in order to reduce the chance of their illegal use. On April 10, 2018, 22 countries of European Union, including Slovakia and the Czech Republic, signed a declaration on the creation of a European Blockchain Partnership. Subsequently, on December 4, 2018, seven EU countries (France, Italy, Spain, Malta, Cyprus, Greece and Portugal) established a group called Mediterranean Seven, which aims to work together to implement blockchain technology to customers in education, transportation, mobility, shipping, real estate cadastre, company register and health care. Mariya Gabriel, Commissioner for Digital Economy and Society, welcomed the creation of the European Blockchain Partnership and added: "In the future, all public services will use blockchain

technology. Blockchain is a great opportunity for Europe and member states to rethink their information systems, to promote user trust and the protection of personal data, to help create new business opportunities and to establish new areas of leadership, benefiting citizens, public services and companies. The Partnership launched today enables member states to work together with the European Commission to turn the enormous potential of blockchain technology into better services for citizens. Despite the efforts of several European nations, such as the United Kingdom and Malta, Europe has lagged behind the USA, Japan, South Korea, Singapore and Switzerland for several years in terms of blockchain implementation and cryptocurrency support. Despite the fact that China banned the ICO in 2017, as well as the cryptocurrency business itself, it ranks among leaders in digital currency mining. But in parallel with these bans, the Chinese government supports the development of blockchain technology. It does not want to miss the imaginary train with innovations and let the rest of the world to overtake in this area. The issue of purchases, sales or other operations with cryptocurrencies does not have any backing in the Czech legislation. This can be attributed to the rapid development to which the legislators have not yet been able to respond, so it is necessary to follow the general legislation. Cryptocurrency operations are so specific that it is possible that one situation can be explained from multiple perspectives and there may be some differences. Most of the global cryptocurrency markets and its associated resources are concentrated in following three countries: USA, Japan and South Korea. According to last year's research report of the Cambridge University, 2.9 to 5.8 million people are now using cryptocurrencies. Except for Malta and Switzerland, most of Europe's regional cryptocurrency markets are significantly weak compared to Asia and the United States. The Mediterranean Seven could so start a wave of positivism towards cryptocurrencies and blockchain in Europe. However, this will only happen if regulators start to be interested in a positive opinion for starting blockchain and crypto-enterprises.

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Social Services in Slovakia in the European Market Area

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Abstract

Social welfare is an essential part of public services provided by the state to its citizens who are dependent on them. It is an integral part of the social policy of any market economy country. The transformation of the economic and political model in Czechoslovakia after 1989, the accession of the Slovak Republic to the European Union and the Schengen area, still determine the current form of social services in Slovakia. The transition to a market economy has brought about a transition from the monopoly position of the state to the arrival of the private sector in this segment of services. Nevertheless, the focus remains on the responsibility of the state, including regional and local authorities. These changes have undoubtedly brought about the overall development of social services, but at the same time they have brought new challenges and problems that the founders have to face. These key challenges are addressed in the present paper. It focuses on the regional unit for which we have designated a Member State of the European Union: the Slovak Republic. In terms of time, it looks back at the decisive changes, but focuses on the current challenges and problems that social services in Slovakia are facing and it is essential for their further full existence and overall progress to respond immediately to them.

Key words: market economy, Slovak Republic, social policy, social services

JEL Classification: E620, I310, I120

1. Introduction

In spite of all qualitative and quantitative changes that the European area, limited by member states of the European Union, has been going through, an extraordinary adverse demographic development is still remaining to be a significant fact in recent decades, so it is not possible to create any responsible policy without reflexions to the challenges associated with it. This applies to the present, to medium term but also to long term horizon. In our paper we are paying our attention to the regional unit, which has been specified to be the Slovak Republic by us, however adverse demographic development is a challenge for an overwhelming majority of the member states of the European Union.

The main target of the presented paper is to refer to the issues, which at the present time are faced by the social services segment in Slovakia. Together with these issues we would like to characterise starting points, which are important in searching for concrete solutions.

In the paper presented by us we are using the method of description and are trying to explain the meaning of social policy in the context of social services. With the help of study of specialised literature, we are trying to characterise the key concept, i.e. social policy. The focus of the paper rests in identification of the problem that social services providers come across, i.e. public as well as non-public providers.

2. Social Policy and Social Services

Social policy is a key concept not only of the social theory, but of practice as well. Social policy is one of the key areas of public policy interests (Mandys, Mojžišová, 2015). As Jusko (2000) is saying when determining the position of the social policy in the society, our basis is delimitation of the concept social sphere, which he later designates as one of the basic components of social life together with the political, cultural and economic sphere. Application of dichotomy between the broad and narrow understanding of social policy was dealt with by Žižková and Krebs (1993), who claim that social policy in broader understanding is a basic policy of the state by which the social sphere of the given society is being influenced and in the narrow understanding the social policy leads to identification with social security. Social policy is a significant part of each government policy, through which the improvement of long-term interests of a society as a whole is achieved by the increase of standard of living of an individual.

The period after the war in Europe has brought the endeavours to exceed the framework of individual states and convergence as well as harmonisation of social problems in addition to other issues. Several institutions, e.g. UNICEF, World Health Organisation, International Labour Organisation etc. have become active in the area of social sphere on the European and some of them also on the global level. The European Union itself has set several targets and some of them directly or indirectly concern also the social sphere. In addition to other things Šíbl (1998) is mentioning: improvement of conditions of life and working conditions of the population of the European Union, cooperation in social area; gradual levelling of economic imbalance between various states and regions; support of economic development by creating economic union without borders and currency union by introduction of a single currency Euro, etc.

The period since 1980 until now has been characterised by the author Večeřa (1996) as follows: "Searching for new mechanisms as well as the activity of the social state itself was caused by its present day situation, which has been designated as the crisis of the social state. It has been evoked above all by inappropriate growth of costs, by loss of efficiency of the social state, by loss of social consensus and upon this also by legitimacy of the social state and by demographic changes". The Constitution of the Slovak Republic has been adopted in 1992 and has been in force since 1.1.1993, which has become a guarantee of fundamental human rights and freedoms. Oláh and Igliarová (2015) emphasise that Section V is very important for the area of social work and services, in which economic, cultural and last but not least social rights have been enshrined.

Within the field of social policy there are some basic European social models such as liberal or residual with a typical example of Great Britain. Another model is Scandinavian Model often called redistributive that is typical for Denmark, Norway or Sweden. Conservative-corporative model is typical for Germany, Southern or Mediterranean model is applied in Italy, Spain, Greece or San Marino. The countries in Central Europe such as Slovakia, Czechs, Poland or Hungary do not share typical symptoms of the above mentioned models due to their chaotic development in social policy and it is difficult to identify the signs they share and that differ them from each other. Before the World War II especially the Bismarck Type was developed in Central Europe. After World War II a universal social model was influenced by the Soviet Union and developed (Bočáková, Kubíčková, Vavruš, 2016). At present the Visegrad group attempts to create a sustainable social system employing elements from other existing and operating systems. The newly created social systems are partially influenced by the members of the current national cabinets. In Slovakia and the Czech Republic the ruling political parties direct their power from the right to the left and they try to implement a

generous social system with a strong position and interference of the state in contrary to central-right political parties that prefer less interference of the government and more budget responsibility. It is concluded that V4 Group does not base their social system on a strict liberalism as it is in Great Britain. Families play a key role in the society but not as much as it is in Greece, social system is not as generous as it is in Sweden, Norway, or Denmark.

Social rights are naturally connected with their recipients. Not only in Slovakia discussions take place on how to name these recipients. The Czech scientists from the Research Institute of Labour and Social Matters draw our attention to the fact that the concept "client" has discontinued to be used and is gradually being replaced by the term "social services user" - this concept has been accepted by the majority of stake holders (Bjalkovski, Frühbauer, 2000).

3. Provision of Social Services in the Present Market Environment

Social services providers can be public or non-public. Public providers are above all municipalities, towns and higher territorial units. Non-public providers are most frequently established by non-profit organisations, civic associations and registered churches (Imrovič, 2016). The cardinal problem connecting public as well as non-public providers is shortage of financial means often fluctuating on the limit of insolvency. This situation hinders the development of the facilities and the overall infrastructure of social services in Slovakia. Public providers draw their financial means first of all from the financial contribution provided from the budget of the ministry for financing of concrete social service and from payments for social services from the social services recipients. We have to say that financial means are being transferred to individual facilities through their founders - through the towns, municipalities and self-governing regions that receive them directly from the budget of the individual department. Non-public providers receive also financial means from the recipients of social services and from the state, more precisely from the Ministry of Labour, Social Matters and Family of the Slovak Republic, i.e. they receive them directly. The contributions are being paid out on quarterly basis. The amount for a concrete kind of social service of the social provider for the recipient of social services is provided in the generally binding regulation of the higher territorial unit or the municipality / town; non-public provider specifies the amount of payment for social service, the manner of its specification and payment in the contract, to the maximum amount of economically justified costs.

The availability of further financial means is possible on the one hand, however in practice it is limited, these are above all financial donations of legal and natural persons. However, motivation to support facilities of social services is low, in particular facilities for senior citizens are not attractive for the potential sponsors. Adequate allocation and development of social infrastructure has been recognized at the level of the European Union as factors for better opportunities for integration into the elderly into society (Kiaušienė, Vaznonienė, 2016).

In case of non-public providers the financial means are assigned directly for personal costs for wages for the employees, however not for the recipients. There is a significant discrepancy between the Ministry of Labour, Social Matters and Family of the Slovak Republic, which provides the funds in such amounts that the staff of carers - the most numerous group of employees of social services facilities has been assigned to the first level of the difficulty of labour. However, the labour inspectorates have been warning for a long time, that the job description of carers fully corresponds to the second level of difficulty of labour, which represents 1.2 multiple of costs for wages of the employee or as the case may be the costs of employer. Facilities of social services provide arguments based on shortage of funds for paying out higher wages and resulting assignment the carers into higher level of difficulty of labour.

Table 1: Minimum Demands on Wages

Level of difficulty of work	Coefficient
1	1.0
2	1.2
3	1.4
4	1.6
5	1.8
6	2.0

Source: National Inspectorate of Labour [online], 2020

The amount of the contribution from the Ministry of Labour, Social Affairs and Family of the Slovak Republic depends on the form, in which the social service is being provided, on the kind and level of dependence of the clients. The amounts of contributions for facilities for seniors with the all-year-round operation can be found below. The basis for assigning to the level of dependence is the medical finding of local GP of the applicant (potential recipient), personal visit by social workers of respective municipal office according to permanent residence of the applicant and subsequently the assessment of the physician, who has been engaged by the municipal office. A similar decision regarding dependence on the social service is being issued by each self-governing region and it has the same legal value as the decision issued by local self-administration.

Table 2: The Amount of Financial Contribution according to the Dependence Level

Level of dependence of a natural person on the assistance of another natural person	amount of financial contribution for providing accommodation-based social service/month/place
II. level	EUR 104
III. level	EUR 234
IV. level	EUR 312
V. level	EUR 442
VI. level	EUR 546

Source: Ministry of labour, social affairs and family of the Slovak Republic [online], 2020

Key precondition of their existence for non-public providers are their financial contributions provided by the Ministry of labour, social affairs and family of the Slovak Republic. In real life they come across the situation that they receive these funds to their account with delay, even several weeks or months after the beginning of the calendar year, in which these financial means were supposed to cover the costs connected with provision of social services. Such situation puts providers into uncertainty and for a certain period of time into financial insolvency. Such situation continues not only in Slovakia, but also in the neighbouring Czech Republic, our words are also being confirmed by Matoušek (2007) and his team.

In addition to financial problems the social services facilities fight also with shortage of labour force. The amount of wages is not sufficiently attractive for the citizens from less developed states of the European Union, because it is necessary for them to move to the concrete working position, even more difficult it is in case of families with minor children. When employing the citizens from the third countries a big obstacle is a language barrier and last but not least it is

the administrative burden. The citizens of the Slovak Republic, who have been living longer in this country, are capable to find a physically and mentally less demanding work, which is often better paid. Shortage of work force in the social service has also been confirmed by the Association of Social Services Providers in the Slovak Republic (2018).

The European Commission is trying to create a framework for the future of the system of protection, namely in the context to develop the ideas and to accommodate the national systems on the basis of understanding according to what is happening in other member states. For the time being it concerns only social protection, but for the future it will apply also to social care. The main issue of the closest future will be ensuring of social service for still increasing number of senior citizens (Bjalkovski, Frühbauer, 2000). Yet this issue is going to rise with the increasing number of recipients of pension benefits and economically non-active population with dropping numbers of inhabitants in productive age and also those who pay health insurance, social insurance as well as taxes to the state. A partial solution may be increased burden of deductions for tax and social welfare which would very probably lead to social tension. The scenario of decrease of paid out pension benefits or expenses for health and social care seems to be highly improbable.

Market mechanism is bringing wide possibilities and there exists wide space for doing business in the area of social services. The uncertainty of positive financial result and the difficulty to achieve it discourages the potential businessmen or as the case may be beginners active in social services from setting up new facilities of social services. Another significant factor is acute shortage of qualified labour force. The greatest problems are when filling in the working positions of the carer, ambulance men or a nurse. Undervaluation of wages discourages the applicants for this occupation and for retraining in this field, it is one of the reasons why the employees leave the mentioned facilities of social services. In addition to financial reasons they are: physical difficulty and mental burden, necessity to work in night shifts, repeated overtime work, violating of normatives at workplaces. The answer why the free working positions in the segment of social services are not attractive can be looked for in the explanation of the team of authors, what the work itself is: *“Work is an important condition of existence of a human being, it brings him not only material benefit, but at the same time it gives them the feeling of self-fulfilment and the feeling of being socially useful. It assigns a human being into the row of social relations, it satisfies his needs of ambitiousness, self-assertion and self-esteem.”* (Buchtová, Šmajš, Bolelooucký, 2013). If we stop and think about this explanation, so we find out, that with working positions in the area of social services the work does not fulfil the attributes of being reasonably attractive to a sufficient degree. Material benefit is the result of salary of wages, which is not reasonable or appropriate. At the beginning of the year 2020 the average salary of a carer for seniors fluctuated from EUR 580 to EUR 784 //gross//month (www.platy.sk [online],). The minimum wage for 2020 has been set to EUR 580 in case of monthly wages and to EUR 3,333 in case of hourly wages. In both cases gross // month (Ministry of labour, social affairs and family of the Slovak Republic, 2020). From the point of view of wages these wages are putting the staff in the facilities of social services just above the minimum wages, in some cases on their limit. Regional disproportions are present on the one hand, but on the other they are in no way significant. The feeling of self-fulfilment is a present element on the one hand, however questionable is its weight when making a decision regarding selection of a working position of the applicant.

In our opinion social usefulness is not adequately presented and does not correspond to the significance and difficulty of work in the line of work of social services. Professions such as carer, ambulance man or nurse miss social recognition, respect and stronger awareness of irreplaceable significance of these profession in the awareness of professional as well as lay public. Insufficient wages, minimum and frequently no fringe benefits for the employees,

limited possibilities of career growth or unacceptable work conditions discourage the applicants in a principle way from employment and work in facilities of social services. Higher attractiveness of these occupations would contribute to creation of new working positions, which would be stable. The development of structure of unemployment is dependent on the present conditions on the labour market (Tiruneh, Štefánik et al., 2014). Working positions in the facilities of social services would not be endangered by economic stagnation, the result of which would be the decrease of employment, because of the fact that also at the time economic stagnation the demand for services in the facilities of social services would be on the rise. It is necessary to react promptly and conceptually to this situation, because solution in not acutely absencing and medium term and long-term horizon will require solution of several questions.

Population aging, insufficient capacities in the facilities of social services and shortage of work force are topics also in the pre-election discussions of the political parties. The political parties agree across the whole spectrum that this situation has to be urgently solved, they also agree on the unfavourable prediction of the development under the pressure of demographic development of Slovak population. By the way a very similar demographic development is a challenge of the present and of the future for other member states of the European Union. Such significant pressure on public finances, which will be caused by adverse demographic development in the member states of the European Union should be reflected in the assigned financial means for development of social services in the member states as an integrated part of the structural funds of the European Union. Realizing that social policies are in the competence of national governments (Lukáč, 2016), we do emphasise the need of broader possibilities of drawing the investments from the European Union funds into the segment of social services, which will cause creation of new working positions, particularly in less developed regions, it will create pressure on growth of wages, support formation of new facilities of social services and as a final result it will comprehensively increase the level of quality and availability of provided social services.

4. Conclusion

On the basis of the above-mentioned facts it is our opinion that social policy represents an integrated and significant part of public policies. Adverse demographic development represents a big challenge not only for the Slovak Republic, but also for other member states of the European Union, in which the aging tendency of the population is very similar. Market mechanism brings in its essence many solutions in the area of economy, however it is not capable to solve all challenges, which are faced by the state and the society, it applies in particular to the area of social policy. The state remains a responsible player for solution of negative demographic development. It is not sufficient that it saturates the needs of those, who are dependent on its help, but also those, who are not capable to help themselves, because of objective reasons and who have not a family or a close individual, who could help them or these are not able to help them.

The state must actively create the conditions, so that the social services are available for all, if it is required by their health and social condition, namely in the reasonable time horizon and in appropriate quality. From the demographic development it is clear that the demand for services in the facilities of social services is going to grow and on the other hand the proportion of population in the productive age is going to decrease - which is going to create even bigger pressure on public finances. The state and its bodies have to start increasing of wages for the working people, which will create space for coming of new qualified employees and will prevent the departure of those employees, who under the pressure of unsuitable conditions are considering to leave and reject their further activities in the area of social services. A suitable

solution is considered to be setting the wage tariff of the carer staff so, that the employees, who fulfil required qualification are remunerated on the basis of the level of difficulty, which should be at least 2 with the wage demands corresponding to it. In order to increase the quality of provided services it is necessary to invest massively into reconstruction and refurbishment of premises in the facilities of social services. Within the overall context the issues of social services are that serious, that it should become one of the priorities of the future government of the Slovak Republic. Population development in Slovakia is very similar to other countries of the European Union, it would be suitable to react to this challenge also on the European level, in spite of the fact that the social policies are above all in the hands of national governments. The possibility drawing financial means from the structural funds of the European Union, which should be assigned to their development, would significantly help the development of social services in Slovakia, however without unnecessary red tape and extreme administrative burden. Population aging is the biggest success of the social policy, but at the same time it is one of the main problems. The increase of proportion of citizens in the post-productive age in the total number of citizens of the Slovak Republic represents a big challenge for the present as well as for the future social policy, to which reaction is absolutely necessary.

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EU and the Reform of the International Investment Dispute Settlement System

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Abstract

In the past decade, the international investment dispute settlement system has faced an unprecedented level of scrutiny which led to the initiation of a fundamental reconstruction effort led in part by the EU. Although there are multiple stakeholders involved in the reform process, this paper aims to analyze the EU's position and actions shaping the direction in which the reform process is headed. Responding to the criticism of the arbitral mechanism system in terms of its overall appropriateness as a mechanism for resolving international investor-state disputes, one of EU's strongest positions has been the advocacy for the creation of a multilateral investment court that would replace the current not-so-well received system of independent ad hoc tribunals resolving international investment disputes. This paper will also analyze the recent EU investment-treaty making practice and also address the effect that the undergoing ISDS reform will have on international investment protection in potential future EU member states such as North Macedonia.

Keywords: EU, international investment, ISDS reform, international investment treaties, multilateral investment court

JEL Classification: F02, F53, K33, K41

1. Introduction

The significant number of international investment arbitrations that has taken place over the last thirty years has been a proof of the undeniable benefits that this type of dispute resolution bears for the investment community in particular. Since the first instance of use of the investor-state dispute settlement (ISDS) mechanism in 1987 until the 31 December 2019, there have been a total of 1023 investment arbitration cases recorded worldwide (UNCTAD, 2019). If nothing else, this number confirms that over the years foreign investors have been increasingly resorting to investor-state arbitration as a platform for bringing their claims against host states for breaching host states' obligations under bilateral as well as multilateral (such as the Energy Charter Treaty) investment agreements. These claims largely include instances of host states

introducing regulatory measures, often in public interest, that bear negative effects on foreign investor's profits or legitimate expectations with respect to their entrepreneurial activities.

However, along with the positive and welcomed features of the international investment dispute resolution system, such as expediency, flexibility and a high level of expertise of arbitrators working in investment arbitration tribunals, the growing number of cases has also brought attention to the insufficiencies of the system in its existing form.

Not long after the proliferation of international investment arbitration proceedings, especially host states involved in this type of dispute settlement have brought forward their reservations with respect to the current ISDS system. Issues such as lack of legitimacy, transparency, occurrence of inconsistent or even contradictory arbitration awards in cases based on similar legal and factual background, related lack of predictability and stability of the investment arbitration system, as well as non-existent mechanisms for correcting errors of law occurring in a number of arbitration awards, as well as concerns relating to impartiality of arbitrators have been listed among the most frequent criticisms voiced in connection with the current ISDS.

When the Lisbon Treaty came into effect on 1 December 2009, it has been clarified that issues concerning foreign direct investment fall within the common commercial policy under the European Union's external action (Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community) (OJ C 306, 17.12.2007). Ever since, the European Commission has devoted increased attention to discussions among member states regarding the possible paths of reforming the current ISDS system. In October 2015, the European Commission published the Communication titled "*Trade for all - Towards a more responsible trade and investment policy*", which read: "The EU is best placed — and has a special responsibility — to lead the reform of the global investment regime, as its founder and main actor. The Commission, which has new responsibilities for investment protection since the Lisbon Treaty transferred competence in this area to the EU, has made reform a priority and is ready to take the lead globally." (European Commission, 2010) In practice, this led to a proposal by the European Commission to include in all EU trade and investment negotiations a permanent institution for resolving investment disputes known as the Investment Court System (ICS). (European Commission, 2015)

The public consultation on EU's policy on possible options for multilateral reform of investment dispute resolution, including the possible establishment of a permanent Multilateral Investment Court, has been launched based on the Inception Impact Assessment (IIA) published by the European Commission on 1 August 2016. (European Commission, 2016)

Eventually, the agenda of potential reforms of the ISDS system has been brought to the most appropriate international forum, i.e. United Nations Commission on International Trade Law (UNCITRAL). Since 2017, UNCITRAL has been formally deliberating possible multilateral reform of ISDS system. Working Group III (WG III) had been established and in April 2019, it has concluded that reforms of the ISDS system were desirable. Thus, WG III has been mandated by UNCITRAL to work on three phases of the proposed reform: (1) identify and consider concerns regarding ISDS, (2) consider whether reform is desirable and, if so, (3) develop any relevant solutions to be recommended to UNCITRAL. (UNCITRAL, 2020)

Although there are a number of proposals addressing an entire spectrum of specific concerns relating to the insufficiencies of the current ISDS mechanism, this paper shall analyse the developments of the reform efforts led by the European Union, particularly with respect to introducing a standing mechanism for ISDS and their reflection in trade treaties with

investment and ISDS provisions recently concluded or currently negotiated by the European Union.

2. Problem Formulation and Methodology

The reform of the investor-state dispute settlement system has been the result of more than three decades of existing dispute settlement practice that brought to attention many of its insufficiencies. The European Union has been one of the core driving forces of the current ISDS reform that has been partly successfully implemented through its newly concluded international agreements relating to investment protection containing an investor-state dispute settlement mechanism. Thus, the actual practical significance of the reform proposed by the European Union can be examined through analysis of the content of the reform proposed by the EU and its reflection in the recently negotiated 'investment' agreements, i.e. international agreements addressing among other things investment protection issues and also containing an investor-state dispute settlement mechanism. Methodologically, this paper will perform a content analysis of selected 'investment' agreements recently concluded by the European Union as to the extent that they reflect particular features of the ISDS reform proposed by the EU. In order to establish the potential effect of this newly forming ISDS mechanism on future potential EU member states such as North Macedonia, this paper will analyse the current state of the investment treaty pool concluded recently by North Macedonia with particular regard to their ISDS mechanisms as well as EU's legal framework in place for unifying the investment regimes of current and future EU member states.

3. Problem Solution

One of the most serious reservations of the investment community with regard to the existing ISDS mechanism is its unpredictability which encompasses a whole array of related insufficiencies. Although the occasional inconsistencies in the decisions of judicial or arbitral bodies may be expected and some degree of inconsistency is viewed by some commentators as 'inherent in any legal system and is not intolerable' (Kaufmann-Kohler, 2007), the fact that the principle of finality of arbitral awards makes it nearly impossible to remedy a situation that is the result of conflicting arbitral awards, of which one may be regarded by professionals as insufficiently supported by reasons or even erroneous, has been the cause of a serious concern. It has particularly negative implications in international investment arbitration due to the involvement of states, where matters of public interest are often at stake in disputes and the pecuniary damages awarded against host states often in hundreds of millions of dollars not rarely have a significant negative fiscal impact on the host state.

The existence of inconsistent decisions generally invokes skepticism about the credibility of the existing dispute resolution system. As Susan D. Franck put it: "Inconsistency tends to signal errors, lends itself to suggestions of unfairness, creates inefficiencies, and generates difficulties related to coherence, most notably a lack of predictability, reliability and clarity." (Franck, S.D., 2005)

The economic performance of many of the EU member states depends heavily on foreign investment and many EU member states are significant capital exporters. Thus, a well-functioning international investment protection system including a reliable system of investor-state dispute settlement is an inevitable instrument in the quest of increasing the overall legal security of international investment. The ongoing EU enlargement process brings about opportunities for new and old member states as well as possibilities of their further development within the European and world economy. (Fojtíková, Staníčková, 2018) This also

encompasses the unification of international investment policy applied by all current and future EU member states towards their economic partners outside of the bloc.

Following its 2015 initial introduction of the Investment Court System as an alternative to the existing ISDS system, the European Union in its January 2019 submission to UNCITRAL WG III first time officially proposed as part of the ISDS reform the creation of a two-instance standing mechanism for the settlement of international investment disputes with full-time adjudicators that would consist of a first instance tribunal and an appellate body. (European Union, 2019)

Even though it has been long used for trade dispute settlement among the WTO members, the creation of a standing dispute settlement mechanism with an appellate instance is quite a revolutionary development in international investment arbitration. For more than three decades, the international investment community has adhered to the standard arbitration procedures as known from private commercial arbitration with single-instance proceedings with final binding arbitral awards and little possibility of mending erroneous outcomes with grave fiscal effects on host states' finances. According to the European Union's submission, the new dispute settlement mechanism consisting of a standing court with an appellate instance would also provide for dispute prevention and mitigation methods, it would provide for clear rules for tribunal members selection, appointment and challenge procedures as well as their code of conduct, it would address cost management and related procedures, it would set out principles and guidelines for the allocation of cost and security for cost and it would also tackle the contentious issue of third party funding. (European Union, 2019)

This new mechanism for the settlement of international investment disputes would address most of the limitations of the current system starting from eliminating the occurrence of inconsistent investment arbitration awards, thus increasing the predictability of the system, strengthening its transparency, legitimacy and neutrality, and decreasing the costs and duration of the investor-state dispute settlement process.

At its October 2019 session in Vienna, the UNCITRAL WGIII member states launched discussions on proposed reforms. The complex structural reforms were discussed during UNCITRAL WG III session in Vienna in January 2020 and further progress was expected to be achieved during the scheduled 39th April session in New York, which has been, however, postponed until further notice due to the worldwide Coronavirus situation. (UNCITRAL, 2020)

As UNCITRAL WGIII member states are working to refine the shape of the newly proposed standing investment court, work has started on the implementation of the proposed reforms. Although it is not yet entirely clear what form the multilateral instrument on the ISDS reform will take, it is conceivable that a multilateral treaty will establish this new mechanism bringing under its umbrella potential international investment disputes that would emerge under all the bilateral investment treaties concluded so far and in the future by the signatories of such a multilateral treaty.

Even though up to date, the precise mechanism of implementing the proposed ISDS reform has not taken shape, the European Union and its like-minded peers in the international investment community have started taking action towards opening the options for the use of this new ISDS mechanism in bilateral investment treaties or trade treaties with investment provisions that have been concluded in the last few years.

Most notably, the European Union recently concluded several investment agreements and trade agreements with investment provisions that reflect the proposed changes and is in the process of negotiating more.

The most significant and progressive trade and investment agreement concluded by the EU in recent years has been the Canada-EU Comprehensive Economic and Trade Agreement (CETA, 2016), which in Chapter 8 addresses investment in the most complex way. Section F is dedicated to the resolution of investor-state disputes. It foresees the constitution of a 15-member tribunal that will hear potential claims in divisions of three members. (CETA Article 8.28) It further provides, quite revolutionary, for the establishment of an appellate tribunal (CETA Article 8.29) that would review awards rendered by the tribunal. In Article 8.28, the contracting parties have agreed to “pursue with other trading partners the establishment of a multilateral investment tribunal and appellate mechanism for the resolution of investment disputes”. In case such a multilateral investment tribunal is established, the parties have agreed to submit their investment disputes under CETA to this multilateral mechanism.

Very interestingly, in 2019, the European Union and its Member States have concluded another Investment Protection Agreement with the Socialist Republic of Viet Nam (EU-Vietnam IPA), which in Subsection 4 provides for a separate Investment Tribunal System with its own built-in mechanism of setting up a ‘permanent’ tribunal for the settlement of claims under this agreement (Article 3.38) including its very own appeal mechanism to hear appeals from awards issued by the Tribunal (Article 3.39). However, Article 3.41 opens the door for parties to this agreement to enter into negotiations for “an international agreement providing for a multilateral investment tribunal in combination with, or separate from, a multilateral appellate mechanism applicable to disputes under this Agreement”. If such an international agreement is concluded in the future, the parties may agree not to apply relevant sections of the EU-Vietnam IPA concerning the ISDS and adhere to the newly established mechanism. (European Commission, 2019)

Furthermore, in 2019, the European Union and its Member States have also concluded an Investment Protection Agreement with Singapore, which similarly provides for the establishment of a First Instance Tribunal (Article 3.9) for the submission of investment claims of investors against the host state under that agreement. According to Article 3.10, a permanent Appeal Tribunal shall be established as well in order to hear appeals from provisional awards issued by the First Instance Tribunal. (European Commission, 2019)

Another milestone in paving the way towards a multilateral consensus on the need of reforming the ISDS system and elevating the new two-instance mechanism for resolving international investment disputes to be the ‘new norm’ is expected to be achieved when bilateral EU-China negotiations on the Comprehensive Agreement on Investment (China-EU CAI) come to a close. EU and China have entered into negotiations in 2014 and are expected to finalize their agreement during 2020. Even though no formal text has been made available yet and the European Commission DG Trade is releasing only brief status reports after each round of negotiations, the EU has made public its expectation for the CAI to reflect EU’s reformed approach to ISDS. Despite EU and China’s differences in many regulatory issues voiced especially within the WTO (Fojtíková 2019), it is expected that China-EU CAI shall steer towards the enhancement of the multilateral reform of the ISDS.

However, due to the transitional arrangement among EU member states with respect to concluding bilateral investment agreements with third countries, which allows for EU member states to negotiate investment agreements on their own in instances where no action so far has been taken nor is foreseen on behalf of the EU, there have been instances when individual EU member states have concluded their own bilateral investment treaties with third countries that do not reflect EU’s position on the ISDS reform. An example thereof could be the bilateral investment agreement concluded between the Slovak Republic and the Islamic Republic of Iran in 2016. Parties to this agreement have not incorporated any of the aforementioned reform

features as proposed and implemented by the EU in its recently concluded investment agreements. On the contrary, in Section C (Investor-State Dispute Settlement) the Slovakia-Iran investment agreement contains only the standard provisions on ad hoc arbitration proceedings in case of an investment dispute arisen under that investment agreement. Thus, this arrangement shall hold only until a new investment agreement is reached with Iran on EU level or a multilateral instrument is signed bringing all bilateral investment treaties with 'old-style' ISDS provisions (previously concluded by the signatories of this multilateral instrument) under its umbrella, provided that Iran will join the international effort to reform the current ISDS system.

As regards the EU candidate countries, such as North Macedonia, the situation is quite similar. In its 2015 bilateral investment agreement with the Kingdom of Denmark, the contracting parties have not included any of the new provisions on the investor-state dispute settlement other than the standard 'old-style' ad hoc arbitration procedure (Article 9 North Macedonia-Denmark BIT). Since this agreement has been signed in 2015, its content may also be attributed to the fact that the ISDS reform proposals were in their early stages then and thus were not ready to be implemented yet.

Since there were no other new bilateral investment treaties concluded by North Macedonia beyond 2015 and currently North Macedonia is not a member of UNCITRAL, and thus is not submitting any proposals to UNCITRAL WGIII on the ongoing ISDS reform, no conclusions can be drawn as to North Macedonia's position in this respect at the moment. However, depending on its EU accession progress it can be expected that as soon as North Macedonia becomes a member of the European Union, all (i) its bilateral investment treaties previously concluded with other EU member states shall be terminated and (ii) its bilateral investment treaties concluded with third countries shall remain in force only until an EU-wide investment agreement with that third country is concluded replacing all the previously concluded EU member state bilateral investment treaties with that country. In theory, this could also be preceded by a multilateral treaty establishing a Multilateral Investment Court to which all EU member states would be contracting parties and then it can be expected that all investment dispute arising under existing investment treaties concluded by its signatories would come under its umbrella.

4. Conclusion

The investor-state dispute settlement system as we have known it for more than three decades has reached its limits. Many capital exporting and importing countries have come to question its legitimacy, neutrality, and the overall appropriateness. With the ever increasing complexity of international investment relations, predictability and general acceptance of the outcome of investor-state dispute settlement is the prerequisite for the deepening of cooperation and trust among key economic players as well as among developing and developed nations that are taking part in the worldwide economic exchange.

The efforts aimed at reforming the ISDS system – which is to a large extent led by the European Union, joined or followed closely by Canada, as well as important emerging Asian economic players such as China, Vietnam, Singapore and others - have led to positive shifts in the overall perception of the future of ISDS. The relentless work that these actors perform at the UNCITRAL or in negotiating their own bilateral investment treaties with reformed ISDS provisions, has proven to increase the visibility and speed at which the reforms are penetrating into the worldwide investment community.

Although some smaller countries, such as Slovakia or North Macedonia have not yet followed suit in introducing reformed ISDS provisions in their own newly negotiated bilateral

investment agreements, it can be expected that due to the EU built-in mechanisms for unifying the approach towards foreign direct investment, the continuing EU enlargement and integration will ensure a more speedy reform process encompassing all its current and future member states.

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‘David and Goliath?’ The EU’s Cooperation with Technological Giants in Fight against Online Disinformation

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Abstract

In light of the emergence and increased sophistication of hybrid threats that started to dominate the security landscape in the past decade, the need to strengthen resilience of European states and societies against this sort of threats got a special urgency. Disinformation and ‘fake news’ spread online have a potential to undermine the foundations that the European democracies are built upon. Their audience is targeted mostly by various webpages and social media. Therefore, in order to resist in a hybrid warfare, effective cooperation with the technological giants in charge of the Internet search engines and social media platforms is a must. EU leaders, aware of this fact, adopted several soft-law documents for that purposes, most notably the Action Plan on disinformation. The tech giants agreed to commit themselves to the Code of Practice against disinformation. This contribution explores what tangible outcomes has the cooperation yielded so far and what are the most salient leftovers that remain to be tackled.

Keywords: Disinformation, fake news, hybrid threats, social media

JEL Classification: F55, K24, O33

1. Introduction

Disinformation and fake news are not new topics in the EU. They have appeared numerous times. Before Poland and other central and eastern European states joined the EU, there was a spread of fake news and disinformation about a cheap labour that will prevail instead of a local one. There is still a massive disinformation campaign in the ongoing conflict in Ukraine and fake news connected to migration crisis.

The disinformation problem did not come out of the blue: it is an ongoing trouble that occupies governments across the whole continent. This very problem of disinformation and so-called fake news seems to begin with a definition. For many people they represent abused terms and are so often labelled as an opinion protected by a misunderstood notion called freedom of expression. One of the approaches to fight disinformation and fake news online might be private censorship, which means restrictions in the social media world. However, this brings only more disputes into the debate of how to deal with this problem (Regulating disinformation with artificial intelligence, 2019, p. 8). Nearly a half of the new EU member states had a painful experience with censorship in their lands during the communist times until the *Annus mirabilis* (1989), when censorship disappeared with great parade.

The palpable questions are: should the national states stand alone and deal with this ongoing trouble, or should they rally under the EU flag? And where is the borderline between freedom of expression and disinformation? This debate about restricting freedom of speech on the internet seems to have an impact on societies much more than a debate how disinformation and fake news pose a threat to them. Due to this lack of understanding between the old and new member states, one could say this environment fits no one - no one except disinformation and fake news authors.

In the light of recent events, mainly parliamentary and presidential elections, the Cambridge Analytica affair and many others, the EU has put an enormous effort into staying behind to fight the disinformation scene. The first step to tackle this issue took place in September 2018 when the representatives of social media platforms such as Facebook, Google, and Twitter agreed on a self-regulatory Code of Practice to deal with the spread of fake news and disinformation online. For the very first-time, social media online platforms agreed to regulate standards to tackle fake news and disinformation. The reason to take action was very simple: the upcoming European Parliamentary elections in 2019. Above all, there was, from a certain point of view, threat to European democracy and liberalism. This threat was represented by omnipresent populist movements across the Union, causing confusion and misuse of social media online platforms.

Nevertheless, this very paper focuses on a recent topic on how the EU tackles with disinformation and fake news and what success it has achieved in this field. Because of the challenges described above, the Commission called upon all the signatories of the Code of Practice to implement the actions and procedures identified in the Code (European Commission, 2018, p. 8-9). The authors of this paper explore what tangible outcomes has the cooperation yielded so far and what are the most salient leftovers that remain to be tackled. For the purposes of this research, the authors employ a method of qualitative content analysis of open source materials collected by desk research.

2. Commitments under the Code of Practice against Disinformation

In Spring 2018, a year before the European Parliament elections, the Commission adopted a communication called 'Tackling online disinformation: a European approach'. The document reiterated the urgency of effective response to the challenge posed by disinformation spread online. The malicious potential of this threat was further increased given the approximating European elections. Several voices had indicated that election meddling attempts instrumentalizing social media and other digital platforms were to target the 2019 election, with the underlying objective of undermining liberal democratic order on the EU level. EU policymakers, aware of this risk, started to design initiatives to strengthen resilience against online disinformation in general – and the ones aiming at 2019 EP elections in particular.

In order to give effect to the strategic resolutions envisaged by the abovementioned communication, they drafted – in collaboration with the private sector and other relevant stakeholders – a so-called 'Code of Practice against Disinformation'. This codex entailed various areas of combating disinformation, that further translated into a list of specific commitments. Private sector organizations (social media platform providers and other digital giants) were to subscribe to the Code of Practice and, while respecting the roadmap drafted by the Commission, to present a list of concrete steps and actions that they agreed to undertake in the respective segments of online resilience.

In the following paragraphs, we will foreshadow what were the most significant commitments included in the Code of Practice. Firstly, the signatories of the Code of Practice promised to

scrutinize the placement of advertisement. This commitment is particularly salient since in the past, revenues from online advertisement were often yielded by subjects spreading fake news. This commitment aimed at limiting placement of advertisement on websites belonging to purveyors of misleading content.

Besides the focus on demonetization of advertisement on disinformation platforms, the Code of Practice also concentrated on the political and issue-based advertising. In this case, emphasis was put on the need to distinguish political advertising from editorial content – and the corresponding necessity to make this distinction manifest even to the general public by special visual labelling. Political and issue-based advertising should thus generally be possible, only provided that the piece of advertisement is identifiable as such and the information regarding a sponsor and an amount spent are made available to users (European Commission, 2018a).

Another area of commitment was the so-called ‘integrity of services’, in practice referring to efforts targeting the fake accounts, use of automated bots to imitate physical users, misrepresentations, and impersonations. Policies developed to increase the standard of verification and identification methods were to be adopted by the signatories of the Code of Practice (European Commission, 2018a).

The Code of Practice also intended to provide more agency to the consumers who should be empowered to apply their own judgment when accessing online content. Special markers (indicators of trustworthiness), created in cooperation with the news community, were to be put in place to further that goal and enable the customers to make informed decisions regarding the veracity of information they encounter online (European Commission, 2018a). Each signatory committed to design such tools that could be applied on the online platform they run. Moreover, online search engines and social media feeds should be equipped with instruments to prioritize authoritative, authentic and relevant content. Last but not least, the signatory companies committed to incentivize research of technological tools to enable users to find different perspectives about the issues of public interest (European Commission, 2018a).

The Code of Practice signatories also committed to support independent researchers (fact-checking community, etc.) in their efforts to track and analyze disinformation; and to host events to facilitate dialogue and exchange of best practices between representatives of the fact-checking community, academics and members of the value chain (European Commission, 2018a).

The Code of Practice not only listed and described the respective actions to be carried out by its signatories, but also endorsed mechanisms for regular feedback and reporting back to the Commission on the measures taken (European Commission, 2018a).

3. Analysis of the Fulfilment of the Commitments

The Code of Practice would have become a mere set of dead letters had it not been followed by real action taken by the signatories to ensure its proper implementation. In the three following sub-chapters, we present the overview of the most substantial tangible steps the three leading tech giants have undertaken in order to fulfil their commitments under the Code of Practice.

3.1. Google

Google signed up to the Code of Practice on 10 October 2018. It subscribed to all of the 15 commitments within the five areas of the Code of Practice. By the end of 2018, Google issued a 'baseline report', in which it summarized its initial compliance with the Code of Practice commitments. In Spring 2019 in a lead-up to the European elections, scheduled to be held at the end of May, Google was supposed to update the Commission on the measures taken in the respective areas of commitments on a monthly basis. In the following paragraphs, we provide a summary of the measures and policies enacted by Google to ensure fulfilment of its commitments under the Code of Practice.

Google employed several measures to scrutinize advertisement. These policies examine firstly the ads themselves, secondly the ad hosting websites that the ads appear on. *Google Ads Misrepresentation Policy* 'prohibits ads that intend to deceive users by excluding relevant information or giving misleading information about products, services, or businesses' (Google, 2019; 2019 a; 2019b; 2019c; 2019d; 2019e). This includes attempts to pretend a false identity or credentials; or promising improbable result to visitors of platforms where these ads are placed on. *AdSense Misrepresentative content policy* establishes a network of digital publishers who are 'prohibited from a provision of misrepresenting, misstating or concealing information about themselves, their content or the primary purpose of their web property' (Google, 2019; 2019 a; 2019b; 2019c; 2019d; 2019e).

Apart from the two previous policies that specifically target advertisement or their platform providers, ads with a potential misleading content are also subject to the following policies: *Valuable inventory policy* and *Google Ads Inappropriate content policy*. The former refers to pages with more advertisement than actual publisher-provided content or pages that expose content generated automatically without any manual alteration. The latter deals with ads entailing content that could incite hatred or violence or be discriminatory towards marginalized individuals or groups based on their inherited features (Google, 2019; 2019a; 2019b; 2019c; 2019d; 2019e).

Google, since it also owns YouTube, applies its advertisement scrutiny policies also on this online platform, employing measures such as the *YouTube Partner Programme* or the *Advertisement-friendly content guidelines* that further the similar aims as the measure applied on its flagship Internet search engine (Google, 2019; 2019a; 2019b; 2019c; 2019d; 2019e).

In respect of political and issue-based advertising, Google has employed labelling of political advertisement that clearly distinguishes it from other (eg. editorial) content. In an effort to strengthen resilience of the European Parliamentary elections, it also introduced verification requirements to increase transparency of the pre-electoral campaigns. Special infoboxes attached to political ads mentioned who paid for such an advertisement. Moreover, Google, inspired by the experience from the past American midterm elections, compiled the '*Election Ads Transparency Report*' to provide a concise overview of the political advertisement landscape in the lead-up to the EP elections (Google, 2019d; 2019e). A special 'ad library' was composed with a purpose of enabling researchers as well as the general public to inspect and download data on who purchased advertisement and toward whom these ads targeted (Google, 2019d; 2019e). Google also put in place requirements to be met by the advertisers in respect to documenting their identity and establishment.

Generally, we can observe that while Google undertook several successful steps to increase political ads transparency, especially in the pre-electoral period, in terms of issue-based advertisement, the measures adopted have been lagging behind (European Commission, 2019). Also, while the political advertisements themselves were exposed to thorough examination via

several Google-run programmes and the demonetization efforts have yielded tangible outcomes, focus on the websites hosting ads has proved not to be sufficient (European Commission, 2019).

In an effort to combat the use of automated bots and misrepresentation, Google carried out efforts to remove content that employs false identities or other untrue substantial information. Google also attempted to avoid creation of 'bad accounts' by developing tools to identify such accounts and shut them down. Webmaster *Guidelines for Search* and *Community Guidelines* on YouTube obliges its users to observe these principles on this video platform also (Google, 2019; 2019a; 2019b; 2019c; 2019d; 2019e). Nonetheless, besides closing down fake accounts, Google should concentrate more on revealing the link between automated bots and disinformation (European Commission, 2019).

Already in 2016, Google endorsed measures to empower the users by incorporating the *Fact Check label* into Google News and Google Search to reward digital content providers who abide by the Google fact-checking policies. (Google, 2019). By employing tools such as the Fact Check label, trustworthy online content has become more distinguishable to the users. According to the self-delivered reports by Google, the Google Search algorithms are devised in a way to prioritize authoritative, experience-based and trustworthy search results. A 'full coverage' feature enables users to approach related content from a vast array of other publishers, thereby to be confronted with different perspectives. Google also upheld its commitments in the area of media literacy and digital literacy, eg. by involvement in the '*Be Internet Awesome*' campaign (Google, 2019).

In respect to the 2019 EP elections, Google rolled out several products developed specifically for the purpose of letting voters orientate better in the electoral landscape. These tools entail the '*How to Vote*' search feature, candidates infoboxes, infoboxes on parties participating in the elections and on the European Parliament as such (Google, 2019d; 2019e).

It collaborates with the network of independent fact-checkers IFCN (International Fact-Checking Network) and supports the efforts to create a global fact-checks database (DataCommons project). With the IFCN, the special project 'Fact-Check EU' was launched (Google, 2019; 2019a; 2019b; 2019c; 2019d; 2019e). Furthermore, Google has been promoting research financially and supported several training sessions with the relevant stakeholders (journalists, NGOs' representatives etc.) in order to get them familiarized with the recent trends in the disinformation landscape. Despite these efforts however, Google still has a significant room for improvement in respect to the provision of data to the research community and in establishing effective and permanent channels of cooperation with representatives of the research community (European Commission, 2019a).

3.2 Facebook

Upon becoming a signatory to the self-regulatory EU Code of Practice on Disinformation in October 2018, Facebook committed to uphold all its objectives devised to address the spread of online disinformation and fake news. Nevertheless, the online platform is reported to have approached the five clusters of commitments with a varying level of success (European Commission, 2019).

Based on the annual self-assessment report from September 2019, Facebook has made significant progress in the area of scrutiny of ads placement and identifying and archiving issue-based and political advertising (Facebook, 2019e). Following the provisions of the EU Code of Practice, Facebook established an Ad Library, which catalogues advertisements that are running on the platform and provides data on the advertisers' paid content and financing.

A more strenuous approach is taken towards the category of political advertisements, which are archived in the Ad Library for the period of 7 years (Facebook, 2019d; 2019e).

However, some countries reported that they detected several cases in which political advertisements were not labeled appropriately, particularly those referring to local elections or other polls that occurred at the same time as the European elections. This suggests that the ads transparency tools introduced by Facebook with the aim to identify and correctly label political and issue-based advertising focused predominantly on the European elections, while the procedure was not sufficiently extended to beyond this event (European Regulators Group for Audiovisual Media Services [online], 2019, p. 13).

Furthermore, according to the European Commission's own assessment, there is a notable insufficiency in the quality and scope of contextual data provided by Facebook (European Commission, 2019). More specifically, data on paid political speech, paid trolls, and bought engagement need to be included in order to provide a satisfactory degree of transparency (Pamment, 2020, p. 6). With regard to the functioning of the Ad Library, the database allows the users to perform keyword searches but provides incomplete data when a specific country or region is entered, which also hinders the efficacy of the transparency tool and provides room for further improvement (European Regulators Group for Audiovisual Media Services [online], 2019, p. 12).

According to the annual report, Facebook has also made notable effort in the area of identifying and labeling disinformation and fact-checking (Facebook, 2019e). Since signing the EU Code of Practice on Disinformation, Facebook has continued to expand fact-checking partnerships across the member states of the EU including Spain, Poland, Portugal, Greece, Northern Ireland, Croatia and Lithuania, which it considers a significant improvement (Facebook, 2019b; 2019d; 2019e).

In its baseline report from January 2019, as well as the subsequent monthly reports, Facebook notes that when fact-checking partners mark a story as false, the story's distribution in the News Feed is significantly reduced, which consequently leads to an 80 percent decrease of its future views and reduces economic incentives for spreading fake news (Facebook, 2019; 2019b; 2019c; 2019d). Similarly, Facebook reported that it has successfully reached the optimal balance between reducing the distribution of disinformation and preserving free expression. In its annual report, Facebook accentuated the improvement in its machine learning capabilities, which has led to more effective efforts to locate false information and identify and remove fake accounts that contribute to its spreading (Facebook, 2019e).

However, the quality of Facebook's monitoring tools and the comprehensiveness and access to data has been questioned by the European Commission, which concluded that the current state of the information provided does not allow for an effective identification of malign actors who targeted the individual Member States and that cooperation with independent fact-checkers should further intensify (European Commission, 2019). Therefore, more attention needs to be paid to designing tools that ensure that fact-checked data are made accessible to the public in a feasible manner and are integrated into the platform itself, which would allow for a better understanding of the actual impact fact-checking has on Facebook users (European Commission, 2019; Pamment, 2020, p. 7).

The Commission also noted that Facebook needs to provide a more sufficient explanation to how removing fake accounts has limited the spread of fake news and disinformation in the EU, given that the majority of fake accounts are created with the aim to spread commercial advertisements (European Commission, 2019; Pamment, 2020, p. 9). Moreover, unsatisfactory

progress has been made regarding the development of mechanisms to increase the transparency and credibility of websites hosting ads (European Commission, 2019).

With regard to monitoring disinformation, the self-assessment report published by Facebook also mentions continuing efforts to place contextual labels on specific types of content that have been marked as misleading by the third-party fact-checkers, including written text but also videos and photographs (Facebook, 2019e). As part of its successful mechanism to help tackle the spread of disinformation and educate the users, Facebook lists three main features. The first feature is based on notifying users and page-owners who have shared or are about to share labeled content that it has been rated as false or partially untrue. The second feature revolves around providing links to related articles that explain why has the specific content been labeled. The third feature named 'Context Button' provides users with more information and a wider context of the labeled links appearing in News Feed and their publishers (Facebook, 2019a; 2019e).

According to Facebook, the combination of the three aforementioned features not only ensures greater transparency and control for Facebook users over the content they receive and share, but also leads to an improvement in media literacy (Facebook, 2019e). Furthermore, in line with the EU Code of Practice on Disinformation, which states that: 'Signatories commit to partner with civil society, governments, educational institutions, and other stakeholders to support efforts aimed at improving critical thinking and digital media literacy' (European Commission, 2018a), Facebook provided support to its fact-checking partners to realize a media literacy campaign that was launched in all members states of the EU, created a Digital Literacy Library that offers online lessons designed to help develop critical thinking to young people aged 11-18, and cooperated with regional digital media literacy programs such as the German newspaper Zeit or the Digital Youth Forum in Poland (Facebook, 2019c; 2019e).

Although Facebook proved to be reasonably active in the sphere of improving media literacy, the European Commission noted that similar progress should be made in the area of cooperation with independent researchers (European Commission, 2019a). Facebook's current mode of operation relies on a close cooperation with independent experts to produce unbiased analyses of its takedown data for public review (Facebook, 2019e). However, the data provided by Facebook are not utilized to their full potential, which can be partly attributed to an enduring lack of consensus over which specific datasets should be researched and under which privacy and security provisions should the research be conducted (European Commission, 2019a; Pamment, 2020, p. 10).

Despite the shortcomings that were identified in the area of content labeling transparency, data quality and research community empowerment, Facebook made tangible progress in addressing the spread of disinformation and fake news compared to the situation before October 2018. Nonetheless, the adoption of the EU Code of Practice on Disinformation represents a first step rather than a definitive solution to the issue and, as concluded by the European Commission, the success of the efforts depends on a long-term commitment of Facebook, as well as other online platforms, to ensure greater transparency and to encourage independent research (European Commission, 2019; 2019a).

3.3. Twitter

As one of the social media platforms signatories, Twitter has joined the crew and provided updates on its policy. In February 2019, Twitter policy about political campaign was expanded to cover all EU member states. This policy provided public insight on who is running a political campaign on Twitter with a focus on ads purchased by a national or European party, ads

purchased by a candidate, and ads that advocate for or against a clearly identified candidate or party (Twitter, 2019, p. 10). Twitter accounts will be challenged if the following three categories of manipulative behaviour and content will be shown: '1. misleading information about how to participate in an election or other civic event (how to vote etc.); 2. voter suppression and intimidation in the meaning that users cannot share false or misleading information intended to intimidate voters from participating in an election; 3. false or misleading affiliation, mainly that users cannot create fake accounts which misrepresent their affiliation or share content that falsely represents their affiliation to a candidate, elected official or a political party' (Twitter, 2019, p. 17-18).

In the time of European Parliamentary election campaign, Twitter has published monthly reports to highlight its updates on election integrity. Let's have a look on EU Political Campaigning Ads policy. According to Twitter's new policy, political content which includes political campaign advertisers must complete a certification process. Twitter, in its monthly reports, provided a number of rejected ads from targeting member states and political campaign advertisers for the EU Parliamentary elections that did not complete the certification process. The total number of these rejected ads is around 600. According to the objectives of the Commission, Twitter has changed its rhetoric and took part in action against disinformation: 'We believe we have a responsibility to protect the integrity of election conversations from interference and manipulation and we therefore prohibit attempts to use our services to manipulate or disrupt elections' (Twitter, 2019, p. 15).

Due to the recent progress, Twitter has taken down many influence operations, some of them from Russia, others from Iran, China and Saudi Arabia. Nevertheless, there is still a need for further research on how many and which accounts were acting in the disinformation scene (Pamment, 2020). During the period from 1st of January until 31st of August, Twitter has challenged about 126 025 294 accounts and in the same period of time, 4 544 096 users reported spams after Twitter users received interaction from a suspected spam Twitter account (Twitter, 2019, p. 19-22).

Progress like this with these measures was possible only on the EU level of governance. It is highly unexpected that a national state would achieve such objectives as the EU did. These activities were carried out in the need to protect the European Parliamentary elections and so it could be understood as the first step to tackle this complicated issue. Disinformation and fake news are present in many other topics i.e. migration crisis or health issues through vaccinations, so this fight is far from over.

4. Conclusion

It has been shown that the extent of actions taken by the three online platforms to bring their commitments under the Code of Practice to completion vary significantly. Correspondingly, discrepancies in implementation of the specific policies devised by Google, Facebook and Twitter in order to address the spread of disinformation, the level of cooperation with third-party actors, and insufficient quality and breadth of released data prevail across all three platforms.

The self-assessment reports produced by the three signatories, the evaluation carried out by the European Commission, and the analyses realized by independent actors (European Regulators Group for Audiovisual Media Services [online], 2019; Pamment, 2020) suggest that Google, Facebook, and Twitter made notable advancements in the implementation of the Code's provisions, particularly in the area of improving media literacy and political ad labeling, particularly in the case of Google and Twitter.

However, the shortcomings identified in the policies and schemes adopted by the online platforms are far from marginal. The areas include the transparency of content labeling, especially in the context of political ads in the case of Facebook, an insufficient emphasis on websites hosting ads in, particularly in the case of Facebook and Google, and the lack of focus on data quality and empowerment of the research community.

It remains yet to be determined if the three information technology giants will put a sufficient effort into addressing these inconsistencies in the long term and whether these shortcomings will actually prove a significant hindrance. It is, however, evident that compliance with the provisions of the Code of Practice represents only an initial step in the joint efforts to enhance the EU's resilience to the spread of fake news and disinformation.

The new European Commission has already indicated that tackling online disinformation on search engines and social media platforms will continue to be its utmost priority. The Work Programme of the Commission and the recently revealed digital strategy both foreshadow that by the end of 2020, the 'Digital Services Act' legislative package and the 'European Democracy Action Plan' shall further tighten the rules for the tech giants and expose them to stronger public oversight (European Commission, 2020; 2020a). For the purposes of future research, it will be interesting to observe how the EU's regulatory approach evolves, whether the employment of voluntary tools such as the Code of Practice will continue or if the EU will resort to more stringent instruments (regulations, directives) to harmonize the rules and ensure compliance.

The need to tackle the growing presence of disinformation in European online landscape may eventually put the two sides of the process even in juxtaposition, with the online platforms serving as media allowing the spread of this phenomenon and, to a certain extent, as advocates of free expression and the European Union as a regulator. The efforts to mitigate the negative effects of online disinformation have the potential to be successful only if the two counterparties refrain from facing each other in an uneven contest like the eponymous David and Goliath and, instead, contrive a way to utilize the synergy between them to achieve a higher level of cooperation.

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The EU's Future – Projection, Comparison and Impacts of Global Trends

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Abstract

The European Union (EU) is preparing for its future, just like other players in the world economy. European Strategy and Policy Analysis System's (ESPAS) analyses have become the basis of its reflections on the main trends that will accompany the transformation of the global economic environment by 2030 and shape a new world order. The paper aims to map and compare the regional approaches of the EU with the approaches of other entities at the global level and level of the multinational companies and to evaluate their penetration and specifics. Above all, they will shape policy directions that confront the EU and its external environment (the world). The three listed components form the content of the three main sections of the article.

Keywords: ESPAS, European Union, external environment, globalization, global trends

JEL Classification: F23, F61, F62, F63, F68

1. Introduction

When we published an article in 2008 on the future of the European Union (EU) in the context of the new regionalism (Cihelková, Hnát 2008), we probably did not even appreciate how big issue will soon become the EU's future in connection with dynamic developments in the world, transformation of the global economic environment and its openness to external political, environmental, technological, legislative and other impacts. While we were aware of the link between the future of the EU and not only one (regional integration), but also other general trends in the world economy (mainly globalization), we did not think about the effects of these trends to change the world economy and thus the global business environment, the need for organizations (businesses) to adapt radically their strategies, structures and processes to the emerging world order, as well as the implications of these trends and impacts for employees themselves (reorganizing work processes, shaping the “creative class”, changing the leader model, etc.).

In the context of the new scientific project for the years 2020–2021 *International Business Environment – Concept, determining current changes and megatrends of future development (with emphasis on phenomena of quantification and firms responses)*, we therefore aim in new conditions, among other things, to explore trends/megatrends of the future development as a challenges for the necessary responses of organizations/companies and management training of a new type and thus contribute to the evaluation of these emerging and strengthening trends/megatrends, conceived by entities of different levels, as a basis for internal corporate actions and personnel training.

The purpose of this paper is to be the first step on this path. It will focus on the EU's perception of these global trends and megatrends that will affect its own future. The global trends identified by the EU will be compared with the concepts of the other two organizations, located at different levels of governance, with the aim of identifying to what extent their approaches coincide/differ. Finally, we will outline the changes that bring these global trends/megatrends. In accordance with the outlined goals of the paper, we will try to answer three research questions: Does the European Strategy and Policy Analysis System (ESPAS) provide sufficient resources and data for a deeper analysis of global trends/megatrends and their application to the future of the EU? To what extent do the global trends defined by ESPAS reflect global forces and megatrends, conceived by two other randomly selected organizations operating globally? What challenges will global trends pose to the response of organizations (the corporate sector)?

2. Literature, Data and Analytical Basis for Exploring the Future of the EU

ESPAS is an inter-institutional program whose mission is to strengthen the European Union's administrative capacity to identify and analyze major global trends and challenges, assess their consequences and the resulting policy changes that decision-makers will face and that are likely to confront in the coming decades Europe and another world. It represents the basis for cooperation and consultation among the officials of the European Parliament, the European Commission, the Council of the EU and the European External Action Service. Together with the European Investment Bank, the Committee of the Regions, the European Economic and Social Committee, the European Union Institute for Security Studies and the European Court of Auditors as observers, these institutions are working on medium- and long-term trends facing or to the European Union. (ESPAS 2020)

ESPAS was initiated in 2010 by a pilot project launched by the European Parliament. As part of the preparatory work for the launch of the project, a general report from the European Union Institute for Security Studies (EUISS) on overall global trends was commissioned and submitted in 2012. In the same year, three research reports from leading think tanks were requested – the Centre for European Policy Studies (CEPS), RAND Corporation, FRIDE and Chatham House – on three specific fields (economics, society, geopolitics), which were completed and submitted in 2013 under the supervision of three ESPAS inter-institutional working groups. All work was discussed and reviewed at annual conferences (in 2011, 2012 and 2014). (ESPAS 2018; ESPAS 2015)

The EUISS report (2012) evaluated the EU's political and economic environment. It has identified several global trends that will shape the world by 2030: empowering the individual, which can contribute to a growing sense of belonging to the human community; the emphasis on sustainable development related to greater resource scarcity, persistent poverty and the consequences of climate change; the development of a polycentric world that could be characterized by a shift of power beyond national borders; a growing gap in governance as a mechanism for interstate relations that may not meet global public requirements. The research report on the CEPS (Gros, Alcidi, 2013) focused on a set of critical economic factors that will shape future growth at a global level and tried to project their possible development into EU conditions. The RAND Corporation report (Hoorens et al., 2013) identifies a number of trends related to the growth of the new global middle class, increasing and aging population, employment and changing labour market, evolving patterns and impacts of migration, connected societies and empowering individuals. Each of these trends can lead to different long-term consequences for European Union's society. Increasing inequality and more

vulnerable groups, the effects of the new global consumer class, adapting to the new demographic reality and opportunities for individual empowerment, but also the risks of division, are most likely. The latest research report by FRIDE and Chatham House (Grevi, Keohane, Lee, Lewis, 2013) shows that the EU will become a fragile place in 2030 as a result of increased economic dependency, the spread of power around the world and undermining the potential of raw material security, climate change and technological innovations. This will shift the power of the world – measured by economic and scientific outputs, demographics, and armaments – from the west to the rest of the world.

The four reports became the starting point for the ESPAS summary report, which was issued in March 2015. It is an essential document *Global Trends to 2030: Can the EU meet the challenges ahead?*. It analyzes global trends that will affect the world by 2030, as well as structural revolutions that make the world more complex, fragile and unpredictable. For the EU, these phenomena will present unforgettable challenges for the future. The five global trends are: 1) Humanity is getting older and richer with the growing middle class and deepening inequalities. 2) Economic weight and political power are shifting to Asia. The sustainable development of the world economy is increasingly vulnerable to the challenges and weaknesses of the globalization process. 3) The revolution in technology and its applications changes society in almost all aspects. Digitization is an attacker with the consequences of radical disruptive changes. 4) Managing scarce resources is becoming an increasing challenge, with increasing energy consumption and shifts in production models. 5) The interdependence of countries that have become a reality of global life does not suit strengthening global governance.

These trends will mean a three-way revolution: economic and technological; social and demographic; geopolitical. These revolutions will have both positive and negative manifestations, arising in an atmosphere of uncertainty, volatility and systemic risk. Examples include a truly inclusive digital revolution, a positive energy revolution, a transformed transatlantic relationship, a renewed multilateral system on the one hand, and major financial and monetary crises, epidemiological and energy crises, conflicts in the Asia-Pacific region, etc. on the other side. (ESPAS, 2015)

We will consider the trend/megatrend categories as key categories for further research. Although neither of them is unambiguously accepted by definition, the term “trend” will mean the development tendency/direction of a rather long-term process of some kind of change. The “megatrend” is more widely accepted as a long-term process of global transformation with a significant impact on all actors in the global community, see e.g. Hay Group (2014b). We will continue to work with this definition, supplemented by the ideas of M. Havránek and O. Pokorný (2016). These authors consider megatrends to be “transformation processes that in the longer term affect our thinking, activities, company organization, and the future reality of the world. The megatrend has been developing for a long time ... and is mostly a collector of a number of mutually supportive and complementary (partial) trends. Megatrends are strongly influenced by each other, and their dynamics are usually driven by the combined action of internal drivers, which represent new paradigms of change with a likely impact on political decision-making, economic relations, environmental processes, future strategy development, innovations and technology. ”

3. Comparison of EU Global Trends with Global Forces and Megatrends of Selected Organizations

In order to answer the second research question, we looked for other organizations that project long-term trends, respectively their impact on the change in the world economy and thus on

the global business environment. These include, for example, the Technology & Innovation Management Practice (London) – see Eagar, Boulton, Demyttenaere (2014), Commonwealth Scientific and Industrial Research Organization (Brisbane) – see Hajkowicz et al. (2016), or Ipsos MORI (London) – see Atkinson, S. (2019). However, they also include many organizations and companies such as: Hay Group/Z-Punkt, as a subnational entity, and Donor Committee for Enterprise Development (DCED), a supranational entity.

Hay Group is a global human resources consulting firm based in Philadelphia, USA. It specializes in transforming organizations, providing services in the area of personnel strategy. (Korn Ferry, 2020) Z-Punkt is a leading international company for strategic issues of the future, based in Cologne, Germany. It helps businesses to cope with future forecasts. As a team of experts on future trends and research, it develops projects for multinationals, innovative SMEs and public sector clients. (Z-Punkt, 2020)

In 2014, Hay Group/Z-Punkt formulated six megatrends that will affect the world, see Table 1. The megatrends were listed in *Leadership 2030: The six megatrends you need to understand to lead your company in the future*. Emphasis was placed on understanding their causes and consequences at three levels: the business environment, organizations and executives and their teams. Since megatrends do not act in isolation but in parallel, their impact on entrepreneurs is intensifying. (Vielmetter, Sell, 2014) Based on the characteristics of megatrends, conclusions have been drawn about what organizations and leaders need to do to succeed in the world markets in the future. (Hay Group, 2014b; Hay Group, 2014b)

DCED is an international platform for the exchange of experience and cooperation between implementing agencies and institutions (e.g. IFC, UNHRC) on private sector involvement in foreign development cooperation projects. It is a group of donors and intergovernmental agencies (including the European Commission, UNCTAD and private foundations) focused on private sector development. DCED aims to reduce poverty, increase economic opportunities and self-sufficiency in the business sector and businesses. He developed the Standard for Results Measurement, which provides a practical framework for programs to monitor progress towards their goals and better measure, manage and present program results. (ORS, 2015) In 2015, DCED contributed to the formulation of the four disruptive global trends listed in Table 1. They were specified in *No Ordinary Disruption: The four global forces breaking all the trends*, published by the American McKinsey Global Institute (Dobbs, Manyika, Woetzel, 2015).

These global forces limit foreign investment, market development, undermine business motivations, and push firms into an informal environment. They will therefore require the business environment reforms that will be needed wherever there are weak regulatory institutions, excessive taxation, lack of competition or an unstable political environment. The reform needs to be implemented especially in relation to national industrial policy (if any) and a broader analysis of the conditions of growth and its barriers. DCED also emphasizes the need for sectoral, respectively a sub-sectoral approach to reform, analysis of global value chains and the role of supplier capacities within these chains. Strengthening the capacities of national regulators should be a key change. (Lukáš, 2015)

The comparison of the main trends/megatrends projected at three levels – subnational, regional and transnational – shows:

- All three organizations coincide in three megatrends, namely a changed technological environment (including an increasing digital lifestyle), a changed physical environment and a changed demographic environment.
- Two organizations intersect with the megatrend of accelerating globalization (ESPAS, Hay Group/Z-Punkt) and increasing global connectivity (ESPAS, DCED). Since the

relationship between the two megatrends can be considered a cause and effect, we can also think about one megatrend.

- Only Hay Group/Z-Punkt consider individualization and the values of pluralism, although EUISS (2012) and RAND Corporation reports (Hoorens et al., 2013) have already pointed out the tendency to empower individuals.

Table 1: Comparison of Trends/Megatrends Projected by Hay Group/Z-Punkt, ESPAS and DCED

Hay Group/Z-Punkt	ESPAS	DCED
Accelerating globalization (globalization 2.0).	Challenges and weaknesses of globalization - jeopardize sustainable development in the world; - shifting economic weight and political power to Asia.	
	There is a growing interdependence of countries that are inconsistent with - strengthening global governance; - increasing fragility and unpredictability of world order.	Increasing global connectivity.
Demographic change.	Humanity is aging and getting rich - the middle class is growing; - inequalities in the world are spreading.	Aging population.
Climate change, its environmental impact and resource scarcity.	The scarcity of resources is increasing – with increasing energy consumption and shifts in production models.	Industrialization and urbanization.
Technology convergence. More and more digital lifestyle.	Revolution in technologies and their applications – the whole society transformation.	Disturbing technology.
Individualization and values of pluralism.		

Source: Own adjustment.

4. Megatrends as Challenges for Organizations to Respond

The main trend that affects and will continue to influence the world economy is globalization. However, according to Hay Group (2014a), the nature of this trend is changing. By shifting the global balance of power towards Asia and the rise of the global middle class, it will grow into so-called globalization 2.0. The shift in the balance of power around the world will be driven by the increasing impact of Asian economic models and management practices and increased trade between emerging/developing countries. The global middle class is also increasing, with consumption trends converging worldwide, but consumer values vary across countries and groups of countries. Middle-class consumption is unevenly distributed across regions, giving regional markets a distinctive and unsystematic approach. Within regions,

people are regrouping (this is the so-called local re-regionalization, which is one of the features of the newly forming economic order). As globalization grows, countries' interdependence and global connectivity are increasing. The growing interdependence of countries is not proportional to the degree of global governance achieved, leading to weakening and unpredictability of the world order. Greater interconnectedness of the world brings greater volatility of markets, increases the likelihood of financial crises and cyberterrorism. Globalization, but also other influences, is associated with a change in the demographic, physical, technological and systemic environment of the world economy, which is briefly characterized below, in particular on the basis of ESPAS (2015), Missiroli et al. (2015) and Hay Group (2014a).

Changes in the demographic environment are linked to the demographic differences of macro-regional, regional, but also between a group of developed and emerging and developing countries. The world's total population is growing, but is also aging. In developed countries and China, life expectancy is rising, but the population is stagnating or declining, while in developing countries populations are growing considerably. Developed countries experience a lack of educated forces as well as the pressure of social security systems. Migration flows to these countries will increase, not only as a result of moving people from countries with larger populations to countries with smaller populations, but also as a result of increasing armed conflicts, disasters and economic problems. The "brain drain" becomes a "brain cycle", which means that the number of migrants returning to their country of origin after a certain period of time in order to accelerate their development.

The change in the physical environment is manifested in particular by the increasing scarcity of resources and damage to the environment. As developing countries become more industrialized and demand for energy and raw materials is increasing, so does the lack of strategic resources such as fossil fuels, minerals, but also water. This depletion of resources, possibly research into their substitutes, will inevitably lead to higher prices for these commodities, competition between their producers, including foreign investors, but may also lead to regional and global conflicts. With increasing industrialization in the world economy and increasing volumes of industrial and other waste, environmental problems will also grow, mainly due to rising CO₂ emissions and the warming of planet Earth. Increased environmental responsibility will be an inevitable consequence of the growing environmental global problem and will lead to increased investment in clean technologies.

The global technological environment will also change dramatically. As a result of miniaturization and virtualization, nano-, bio- and information technologies will converge with the cognitive sciences (NBIC), which stimulate innovations and accelerate R&D in many areas. The NBIC is already accelerating progress, particularly in the fields of medicine, energy, environmental protection and production processes, and their potential for transforming other areas is enormous. Knowledge of complex and feasible technologies will become key business competencies, even in non-technological fields. As information technology and virtualization evolve, more and more business is shifting to employees, especially to a growing group of digital knowledge workers who can work anywhere and establish quick connections with both personal and business entities. Digital tools offer cheap, easy and fast communication, collaboration, organization and production.

The so-called system environment will also change in the world economy. These are, in particular, the strengthening of individualization (freedom of individual choice within societies and communities) and the values of pluralism. Careers play an increasingly important role in seeking individuals to self-fulfilment and self-expression. This leads to greater convergence between private and professional life, as well as the desire of individuals to integrate their

personal and professional goals. The values of pluralism are the perception of oneself as an integral part of a larger whole. Individualization and the values of pluralism have an impact on employee loyalty and motivation. It is related to so-called soft factors such as recognition, self-development, self-direction, value engagement and work-life balance, which often outweigh traditional factors such as wages and benefits. (Missiroli et al. 2015; Hay Group, 2014a)

5. Conclusion

ESPAS, which was set up, among other things, “to provide an inter-institutional system for identifying these trends, and to provide common analyses of probable outcomes on major issues for policy-makers” (ESPAS, 2018), defined five global trends that will in the world to mean a triple-type revolution. However, even after 2015, under the guidance of the Interinstitutional Steering Group, it continues to update its knowledge base on key long-term trends, with particular emphasis on unexpected trends or strongly revised evaluations. In this sense, it publishes a number of very important publications to be found in the open repository base on international strategic studies called ORBIS (ORBIS, 2020). One of the latest publications is the study *Global trends to 2030. Challenges and Choices for Europe* (ESPAS, 2019).

ESPAS provides access to databases containing 350 indicators divided into 1,200 data series. There are 16 domains (demographic trends, health, education, poverty, gender, energy and natural resources, disasters, environment, GDP, labour, trade, funding, science, technology and innovations, connectivity, governance and uncertainty) and subdomains containing individual indicators. Depending on the selected indicator, it is possible to compare countries or groups of countries, respectively relative performance of the country with the Asia-Pacific or world average. It is possible to obtain statistical profiles, i.e. an overview of progress in the development of a country/region through a series of selected indicators and their comparison with the data of the previous reference year. Sustainable development goals data (SDG Data) are also available. Information on statistical indicators presented in the data source database, definitions, classifications used, composition of a particular group of countries and statistical methods used in compiling and processing data can also be obtained.

This project therefore provides sufficient resources and data for our planned analytical studies of global trends and their application to the future of the EU. Note that during the literature search of ESPAS publications we have also registered a number of partial studies that can be used to fulfil our ambition – to contribute to the evaluation of emerging and strengthening trends/megatrends such as Fojtíková and Staníčková (2017) or Antal (2018).

The dynamic developments in the world and the rapid transformation of the global economic environment are now being recognized by theoreticians and practitioners and government experts not only in the EU, but also at the level of various agencies, world forums and global consulting firms, as well as international organizations Hay Group/Z-Punkt and DCED selected by us. A comparison of ESPAS’s global trends with these entities (Table 1) shows that the projections highly converge and differ only in the emphasis on national or corporate levels of manifestation of these megatrends, or the way in which these trends are interpreted.

The delimited megatrends mean that companies need to be sensitive to political and economic changes in their external environment, adapt their global strategies to local markets, and set up teams that are more culturally diversified and support cross-border and multifunctional cooperation. Their increasing priority will be to retain employees with key knowledge and to search for new talents to increase the company’s innovative capacity. With older people,

women, disabled and international migrants at their disposal, businesses need to introduce new age-, gender- and foreign-friendly employment models. Together with the implementation of education and development programs, they will have to organize programs aimed at transferring knowledge between different generations. Business restructuring for sustainability and increased investment in clean technologies will be urgent to address the global environmental problem. Companies will look for suppliers of the necessary energy and raw materials resources and strive to achieve the best possible environmental standards. Only then will they benefit directly from their performance and competitiveness. Finding solutions to environmental problems will lead the organization to accept increased costs, both in terms of raw materials and environmentally sustainable processes. The condition for their survival will be adaptation to a new technological environment. The complexity of the NBIC will lead to the exchange of knowledge and cooperation between businesses – an inter-sectoral partnership; more open structures and independent organizations. Work processes will need to be reorganized by organizations to meet the needs of individuals. They will have to create conditions that support independent, creative work and time management, allowing employees to gain time for their personal projects. With the creative output, a new “creative class” is formed that does not fit in with the conventional form of leadership. Individualisation will result in decentralized workplaces with flexible structures, project teams and higher turnover. Hay Group (2014a)

The trends/megatrends formulated by ESPAS in 2015 are not fixed and unpredictable events. So why do we need to pay attention to these processes despite the fact that they cannot be accurately predicted? The answer has several dimensions. Foresight makes it possible to look at the present from a broader perspective and understand it better. It facilitates timely corrective action against potentially negative developments and model a positive policy environment. Predictions of what might happen are taking open questions and forcing policy makers to address these issues and find solutions that are in the long-term interest of society. Finally, foresight is a key tool to help the European Union shape its future in a positive way. (ESPAS 2015)

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Post-Enlargement Europeanisation of Advocacy Organisations in CEE – a Comparative-Evolutionary Study of Actors, Trends, Characteristics & Drivers

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Abstract:

This paper describes and explains the Europeanization processes among the Central and Eastern European advocacy organisations. The analysis focuses on the post-enlargement phase identifying the main factors of Europeanization both on the in-put and out-put side. Study provides a comparative analysis of four post-communist states (Poland, Hungary, Slovenia and the Czech Republic) that have been subject to Europeanization pressures before and after the EU accession. Employed variables such as the power resources (personnel, finances), levels of professionalization and expertise will explain the main differences in the Europeanization outcomes across countries, policy field and across time. Article relies on data from a large-scale survey of organised interests operating in health care, higher education and energy policy. The selection of policy fields is determined by their diversified redistributive and regulatory functions. The case selection of countries provides a variety of post-communist legacies as well as varieties of post-transition capitalisms and related diversified ways of organising civic society.

Keywords: *advocacy organisations, CEE, Europeanization, interest groups*

JEL Classification: *I10, I20, I28*

1. Introduction

Together with the growth of the European Union's (EU) salience in more and more policy fields, advocacy organisations (AOs) seek influencing supranational policy making more and more. For the Central and Eastern European (CEE) AOs, EU institutions became crucially important in 2004 - the date of the EU 'big-bang' enlargement. It does not mean they were not present in Brussels beforehand. However only with the process of EU accession, they became - together with other political, social and economic actors of the joining states - legitimate agents in the legislative *apparatus* of united Europe. Their success in inserting themselves into the policy making process depends on existing formal and informal ties with EU institutions (Thiel and Uçarer, 2014). Additionally, in the past decades, the EU institutions have been growingly responsive to the input from advocacy organisations.

Differentiating between the pre- and post- EU accession phase is legitimate from many points of view. Formal EU membership opened numerous windows of opportunity for direct access and influence on the supranational policy making process. The funding increased substantially after the EU accession - the pot of money available for various types of civic society actions was significantly richer than in the pre-accession phase. Consequently, we observed the

unprecedented boom in associational life involvement at the supranational level in the case of the CEE states. Consequently, this analysis focuses on the post-accession phase, trying to identify the basic mechanisms, trends, characteristics and drivers of Europeanization. Due to the limited scope of this research paper format, this analysis focuses on some selected items of a larger research undertaking embracing numerous aspects and dimensions. Here we operationalise Europeanization based on the membership in supranational (as well as international) umbrella organisations and related variables. This stays in line with the orthodox mainstream literature on Europeanization, and at the same time it allows to overcome some methodological handicaps related to the conventional ways of defining Europeanization exclusively through the lenses of EU funding. It has to be pointed out that Europeanization takes place at the individual countries differently, but in some aspects is a distinct connection (Kučerová, 2016). In this context it is interesting to point to the Slovenian case, in which in the pre-accession phase the organised interests system's dependence on external funding was low. Accordingly, the independent effect of EU funding can be more clearly empirically distinguished from other determinants of Europeanization (like: professionalization) in Slovenia than in other EU new member states, where the contexts are either blurred or collinear. Furthermore, Slovenia has several distinctive features compared to other CEE states. For example - the transition to a capitalist economy and the new liberal-democratic order was smoother. Secondly, Slovenia is arguably the closest of all CEE to its Western European peers. Thirdly, Slovenia has had comparatively strong trade unions as well as long (pre-socialist, socialist and post-socialist) neo-corporatist tradition (Maloney, Hafner-Fink and Fink-Hafner, 2018, p. 43).

Consequently, in this paper the authors describe and explain the Europeanization processes among the Central and Eastern European advocacy organisations. The analysis focuses on the post-enlargement phase identifying the main factors of Europeanization both on the in-put and out-put side. The study provides a comparative analysis of four post-communist states (Poland, Hungary, Slovenia and the Czech Republic) that have been subject to Europeanization pressures before and after the EU accession. Article relies on data from a large-scale survey of organised interests operating in health care, higher education and energy policy. The selection of policy fields is determined by their diversified redistributive and regulatory functions. The case selection of countries provides a variety of post-communist legacies as well as varieties of post-transition capitalisms and related diversified ways of organising civic society.

2. Conceptualisation of Basic Definitions, Actors and Unit of Analysis

Defining Europeanization in a classical way, as domestic adaptation of institutions, policies and actors as a result of the EU membership, remains in line with the conventional advocacy literature. It looks at how the European integration process affects the interest representation system and advocacy groups in their domestic environment. Investigating the EU's impact, scholars analyse its influence on domestic legislative frameworks, organised interests population ecology, organisational development, professionalization, resources, networking, issue salience, lobbying strategy and tactics as well as other related influence both in member states and candidate or associated countries.

Other perspectives prefer to analyse Europeanization as venue shopping – the extent to which domestic interest groups shift their lobbying activities to the EU level. The literature on the Europeanization of organised interests is rich in studies testing resource-related explanations with some attention to context at the same time (Kanol, 2016, p. 165). One of the most often explored factors of Europeanization are resources. They may include information, material, financial and human resources which allow the organised interest to Europeanize. At the same

time Europeanization opens many windows of opportunity which build up resources, and therefore they should be treated as mutually influencing with the process and phenomena of Europeanization. However there are also studies which question these claims, suggesting that staff resources do not have a significant impact on multi-level venue-shopping in the EU. (Beyers and Kerremans, 2012). Others claim that Europeanization possibilities are largely determined by the group size. Only bigger associations possess the necessary information and expertise that the EU institutions need. It also suggests that the concentrated interests face fewer collective action problems than the diffused interest groups, thus they are more likely to be able to take their activities to the EU level (Kanol, 2016, p.166). But is it the type of organisation *per se*, or more nuanced explanations are needed in this regards?

The available theories inform the Europeanization research in a number of diversified ways. The institutional theoretical accounts focus on the link between the degree of access at the national level and Europeanization. The *persistence hypothesis* suggests that organised interests that entertain access and influence at the national level are more likely to lobby at the European level. However, the more corporatist interest mediation systems, which offer plurality of access points, are less likely to Europeanize than interest groups functioning in a statist system. The competing *compensation hypothesis* assumes that organised interests that do not enjoy access and influence at the national level try to compensate by taking their activities to the European one. However, noteworthy, decentralized systems offer more vertical points of domestic access to interest groups and thus decrease the likelihood of Europeanization compared with centralized systems (Klüver, 2010).

The *degree of fit* argument is another important theoretical approach in researching Europeanization of organised interest from the institutional perspective. In line with this explanation, these interest groups that function in institutional setting that resemble the EU structure find it much less cumbersome to take their activities to Brussels. Since interest groups learn to develop a certain *modus operandi* at the domestic level, adapting to certain functional opportunities and constraints created by the institutional architecture, it is easier for them to adjust to the EU system that resembles similar opportunities and constraints. It means not only interest groups coming from less centralized multi-level (quasi)federal-type governance system should be more prone to Europeanize, but also those that know how to function in neo-corporatist or pluralist intermediation systems (Cowles, 2001). This correlates with the definition of Europeanization which sees it through the logic of the "goodness of fit".

Some other approaches highlight the issue-salience as a predictor of the Europeanization likelihood, namely the issue specificity that the interest group works on conditions its tendency to Europeanize. Beyers and Kerremans (2012) argue that taking action is more likely for organised interests working on topics in which policy change can substantially create a benefit or cost. Moreover, those groups that are active in policy areas with high EU competence should be more likely to engage in EU lobbying. The level of supra-nationalization of a specific policy field creates incentives for Europeanization. Organised interest operating in fields and policy areas that belong to the sphere of EU competences and therefore are subject to higher levels of Europeanization pressures.

Defining the unit of analysis, it is also important to refer to the basic classifications of interest and advocacy groups identified in the scholarly literature. The literature mentions various classifications regarding types of organisations as e.g. referring to Olsonian Collective theory concentrate vs. diffuse interest groups, organisations with corporative resources versus public interest groups, NGOs and business interests (Binderkrantz, 2004, 2008, Beyers et al, 2008a) nevertheless organisation type classification schemes largely correspond to each other. In this study, drawing on Stewart's (1958) typology, we're using "sectional groups" and "cause

groups", that allows us to classify different interest groups according to their membership structure and the nature of the interest they represent. Sectional organisations represent specific groups such as business, associations of well-established and protected professions, doctors, energy producers, workers' unions. These groups represent special interests that create concentrated costs and benefits for their supporters, they are formed to obtain material benefits for specific groups of people. Their goal is to represent specific interest of its members, and their membership is usually limited to that section (Klüver and Sauruggerb, 2013). Cause groups are more idealistic, representing some belief or values such as public interest groups, environmentally and ecologically oriented organisations, patients or health care groups etc. Membership of cause-groups is not restricted; anyone in favor of the groups values can become a member of this group. Cause groups represent diffuse interests that only imply diffuse costs and benefits for their supporters. (Klüver and Sauruggerb, 2013). In this study we include a broad scope of sectional and cause interests from three policy areas Health Care, Higher Education and Energy.

3. Research Design

The research design of this paper is subordinated to its goals. The objective of this article is to describe and explain the Europeanization processes among the Central and Eastern European advocacy organisations. The analysis focuses on the post-enlargement phase identifying the main factors of Europeanization both on the in-put and out-put side. Study provides a comparative analysis of four post-communist states that have been subject to Europeanization pressures before and after the EU accession. Employed variables such as the share of EU funds in IO's budgets, membership in supranational Umbrella Organisations will explain the main differences in the Europeanization outcomes across countries, policy field. Article relies on data from a large-scale survey of organised interests operating in health care, higher education and energy policy.

This paper employs a comparative framework derived from the recognized literature about trans- and inter- national advocacy, using subject matter and selected EU member states as explanatory variable. It compares sets of advocacy organisations across three policy fields in four countries, exploring selected aspects of Europeanisation. It discusses how Europeanization research and advocacy studies relate to each other and can be fruitfully combined to identify processes and mechanisms by which the various levels of the EU polity interact. This analysis explores the degree to which the advocacy groups characteristics and behavior can be tracked back to the EU and EU related factors – directly: through coercion, conditionality, socialization or persuasion, or indirectly: through normative emulation, lesson-drawing, and competition.

The question is under which conditions the Europeanization process affects the organised interests in the new EU member states. Researchers of Europeanization have identified and explained necessary conditions ('misfit' giving rise to adaptational pressure) and casual mechanisms (legal compliance, top-down impulses, incentives, and socialization by persuasion and learning) through which "Europe hits home" (Boerzel and Risse, 2012, p. 1). Combining the Europeanization research and advocacy studies allows to overcome the dominance of the top-down approaches (that tend to over-emphasize the EU as compliance machinery) present in the EU-studies. The down-loading Europeanization approaches have been largely criticized for the prejudice that the main source of domestic change is the supranational level. The "shadow of hierarchy" not only allows the EU to legally impose its policies and institutions on the member states but also provides important incentives to comply.

4. Empirical Data – Analysis and Discussion

Before explaining our methodology, we first briefly define “interest groups” as our core focus of interest. Referring to Rainer Eising (2008), there are three factors that define interest groups, that is: organisation, political interests, and informality. Organisation relates to the nature of the group and excludes broad movements and waves of public opinion. Political interest refers to attempts of these organisations to push public policy in one direction or another on the behalf of constituencies or a general political idea. Informality relates to the fact that interest groups do not normally seek public office but pursue their goals through informal interactions with politicians and bureaucrats (Eising, 2008), therefore groups of interest are an important part of the national and global civil society and play a significant role in regional, national as well as global affairs. To conduct our analysis we compiled a database of all organisations meeting these criteria that currently operate in the health care, energy and higher education sectors in four countries (Czech Republic, Poland, Hungary, and Slovenia). The choice of the three analysed policy areas is justified by their relative diversity a) regulatory and redistributive components and b) type of organisations (concentrated interests and more diffuse interests). As a next step a web survey was established and conducted among all the organisations related to the selected policies in four countries. We contacted all organisations operating in Poland, Hungary, Czech Republic and Slovenia with an online survey consisting, among other things, of three larger building blocks of questions including our main problem - Europeanization. We have received responses from 304 organisations that are being analysed in this study.

Following the scholarly recognized ways of theorizing the Europeanisation processes, our first measured dependent variable is the share of the EU funding in the budgets of organisations in question. Through the survey we asked organisations what percentage of the budget for each organisation are the public and the EU funds. With a complete data for over 200 organisations, using descriptive statistics, we calculated the average share of EU and public funds in the organisations budgets. We analysed the data with the help of graphs to see whether there are any differences between the countries and individual policies.

We found profound differences between the analysed countries and policy sectors (Fig.1). Our analysis indicates that the highest average share of public/EU funds in organisational budgets was indicated by respondents from the Czech Republic (40,91% for all organisations in three policy sectors), while lowest (14,27%) in Hungary. Also there are visible differences among analysed policies. Highest shares of the EU/public funds are visible among organisations that are operating in Higher Education policy, while Health Care and Energy sectors presenting less shares. Taking into account that the organisations are different due to their type, we analysed differences in the share of public/EU funds in organisational budgets using Stewart's (1958) typology of cause and sectional groups.

Again, we found profound difference between group type and average share of EU/Public funds in organisational budgets. Analysis shows that groups that are less concentrated, representing more idealistic goals are also more dependent on public funding. Average share of EU/Public funds in general budget of Cause groups shows 29,1%, while for sectional groups average share is 17,15%.

Subsequently, we examined whether there is a association between organisations operating in a specific policy fields and membership in umbrella organisations at national, European and international level. We used the Chi-Square Tests to perform the analysis. First, we introduced contingency tables. A contingency table is a two-dimensional table containing frequencies by

category. In case of policy sectors (Health Care, Energy and Higher Education) it was two by three since independent variables had 3 values and dependent variables: two (membership/lack of membership in umbrella organisation at certain level). Using the same scheme, we measured correlation between the country and memberships in umbrella organisations at the certain level (cross tabulation two by four) with a use Pearson's contingency coefficient. The results of the analysis show (Tab. 2) that there is no association between specific policy fields organisations and membership in Umbrella Organisations at the national, European and international level. Since the p-value in every analysed case is greater than our chosen significance level ($\alpha = 0.05$) we conclude that there is not enough evidence to suggest an association between organisation operating in specific policy fields and memberships in umbrella organisations at certain levels. Oppositely to the policy fields analysis we found an association (Tab. 1) between variable 1. country and variable 2. membership in UO's at European ($p = 0,002$) and international ($p=0.030$) level, with no visible association at national level. Which allows us to conclude that level of membership in Umbrella Organisations at European and international level can be state dependent phenomenon. We observe that organised interest groups in Poland are less active at European and international level than their counterparts in three other countries, as highest level of membership in supranational organisations is being observed in Hungary and Slovenia.

As the first analysis shows, there is a difference between the type of the group and the share of the EU funds in their budgets. Thus, we decided to analyse if there is any correlation between organisation type (cause groups vs sectional groups) and membership in Umbrella Organisations at the certain levels. For this purpose, using Pearson correlation coefficient, we analysed whether there are correlations between dichotomous categorical variable – group type (using dummy coding: 0/1,) and a continuous variable. We calculated a Pearson correlation for the categories with a valid N of 301. As Tab. 3 shows there is a correlation between the type of the organisation and membership in the national umbrella organisation. In contrast to this, Pearson's correlation coefficient indicates lack of correlation between group type and membership in European and international Umbrella organisations. We can assume that groups presenting more concentrated interest are less often members of UO's at the national level, than cause groups.

5. Conclusion

The conclusions of the provided analysis suggest that the Europeanization of nation-level advocacy organisations is diverse as well at the policy sector as well as country level. AOs, as civil society actors, endogenously co-constitute many aspects of participatory governance in the EU (Thiel and Uçarer, 2014, p. 99). At the same time, they operate differently in the supranational domain of the EU, depending on the country of origin and the sector-specificity. Our analysis based on country and policy field selection shows that Europeanization processes, in line with the theoretical expectations vary. Taking into consideration the classical parameter of Europeanization used in the scholarly literature, that is the share (dependency of) EU-funding, we observed some important country variations. The data shows considerably higher Europeanization of AO in the Czech Republic compared to the (sample) countries average. Moreover, the comparison of the Czech to the Polish and Hungarian AOs reveals even higher (more than double) difference. Sectoral specificity plays a role as a diversifying factor of Europeanisation. Obviously, the higher educational sector is much more exposed to Europeanization pressures in the financial form. Cause-groups also show considerably higher EU-funds dependency compared to sectional groups. It is important to underline that the

provided results are just a fragment and illustration of a wider research undertaking that tests numerous hypotheses about the importance of resources, group-type, goodness of fit, degree of access to policy-makers at the domestic level, as well as the issue-type. Due to the limited scope of this paper, we provide some highlights of the available data.

Following the white book on multi-level governance, advocacy organisations remain an important ally in EU's efforts to decrease the democratic deficit. In the case of the relatively poor NGOs from CEE, the EU acts vice-versa as an important ally improving channels of interest representation. This mutually reinforcing involvement reflects the common need for a counterweight to the legitimacy deficit inherent in the EU functioning. The European Union perceives various types of civic society organisations as vital for the democratic decision-making process, and therefore it stimulates their involvement in policy making as legitimate partners.

It was expressed many times, at various occasions, most directly in the form of a White Paper on Governance (COM 2001). Recognising the importance of associational life for the proper functioning of democracy, the EU institutions – most vocally the EU Commission – called for a more engaged and vibrant European civic society. Increasing pluralism and greater vibrancy aimed at creating a more balanced process involving more diverse and wide range of interests. Bringing citizens closer to the is seen as the key method to combat the alleged democratic deficit, helping to enhance EU's legitimacy and the European integration project in general. However, by implementing these strategies, the EU influences also the structure and functioning of the interest groups system in Europe (Maloney, Hafner-Fink and Fink-Hafner, 2018, p. 42).

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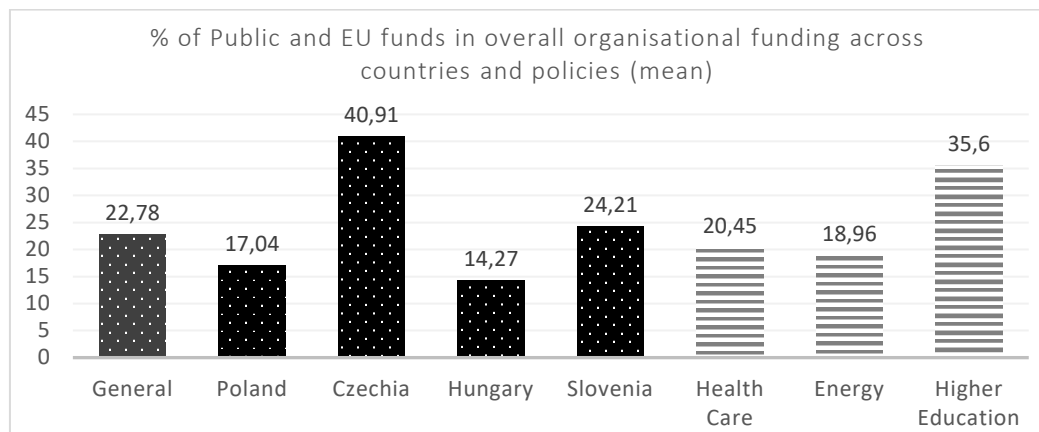
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Appendix

Figure 1: Share of Public and EU Funds (%) in IO's Budgets across Countries and Policies



Source: own elaboration (2020)

Table 1: Chi-Square Test: Country and UO's Membership

	Value	df	Asymp. Sign.	Value	df	Asymp. Sign.	Value	df	Asymp. Sign.
	UO's national			EU UO's			UO's International		
Pearson Chi-Square	2,028 ^a	3	,567	14,641*	3	,002	8,930**	3	,030
Likelihood Ratio	1,998	3	,573	14,899	3	,002	9,274	3	,026
Linear-by- Linear Association	,018	1	,892	4,726	1	,030	1,820	1	,177
Valid N	301			301			301		
a. 0,0% cells (0) have expected count less than 5.									
The min. expected	counts is 15,72.			counts is 20,04.			counts is 12,44.		

Source: own elaboration

Table 2: Chi-Square Test Policy Sector and UO's Membership

	Value	df	Asymp. Sign.	Value	df	Asymp. Sign.
	EU UO's			UO's International		
Pearson Chi-Square	2,491a	2	0,288	,323 ^a	2	,851
Likelihood Ratio	2,490	2	,288	,324	2	,850
Linear-by-Linear Association	,005	1	,943	,314	1	,575
Valid N	301			301		
a. 0,0% cells (0) have expected count less than 5.						
The min.	expected counts is 28,52			expected counts is 17,70		

Source: own elaboration

Table 3: Pearson's Correlation Coefficient: Group Type and UO's Membership

National Umbrella Organisation		Type of IO's	Umbrella
Type of IO's	Pearson Correlation	1	-,265** ^a
	Sig. (2 tailed) N		,000
EU Umbrella Organisation			
Type of IO's	Pearson Correlation	1	-,032
	Sig. (2 tailed) N		,606
International Umbrella Organisation			
Type of IO's	Pearson Correlation	1	-,085
	Sig. (2 tailed) N		,168

a) Correlation significant at the 0.01 (2-tailed) b) N (valid): 262; Source: own elaboration

Credibility as an Aspect of Education to the European Union Citizenship

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Abstract

In the Slovak Republic, there has been a low level of voter turnout in the European Parliament elections for a long time and we are also among the countries with the lowest turnout in the whole European Union. The authors, therefore, address the issue of credibility in the present research study as one of the important aspects of citizenship education in the European Union and a possible increase in the interest of Slovaks in European politics. The research carried out an analysis of the public opinion of Slovak citizens focused on trust in politics and politicians themselves. The analysis confirmed, among other things, the low participation of Slovaks in the European elections, but also the low interest of Slovaks in politics. Demanded citizens are most influenced by the political situation in the country, family, and politicians. Research also showed that the Slovaks consider the fulfillment of promises, honesty and moral values as the main criteria of credibility.

Keywords: active participation, confidence, politics, political culture, public opinion

JEL Classification: F50, F68, Z11

1. Introduction

Public opinion polls on credibility and untrustworthiness towards politicians are now popular among the public. The interest of the media and people in these surveys is increasing especially during the pre-election period when the public decides to whom to vote at election day. According to Jaroslav Čárský (2018), public confidence in political leaders is an indicator of the difference between responsible, moral politicians and populists. Obviously, in today's digital era, the public has a better means and chances of finding any political mistakes.. Political misconduct is known to be detrimental to the involved politicians. (Brosius, 2020) "However, some scientists consider populist attitudes only as a further measurement of existing and established concepts such as political trust and external political effectiveness." (Geurkink, Zaslove, 2020, p. 247) On the other hand, it is political advertising that intends to improve the credibility of the public towards politicians and political parties. Ivana Polakevičová (2015, p. 11) notes that in recent years there has been an increase in political advertising and political marketing.

If confidence in national institutions in the country is low, it can transfer to the European area. "Trust in the European Union is closely related to trust in national political institutions through extrapolation of impacts on domestic policy ". (Brosius, Elsas, 2020, p. 1) The question of credibility among members of European parliament (MEPs) is often associated with a lack of information on the political representatives. The general public does not have sufficient

information about their representatives in the European Parliament, because there they must following the unified agenda of their European parliament groups. "On the global scene, the EU must speak with one voice to face a multitude of political, military and economic crises." (Staníčková, 2018, p. 1351) (Staníčková, 2018, p. 1351) Thus, the European Union itself must speak with one voice and cannot focus on the needs of individual Member States, although it must take into account partly the problems and challenges of the EU core. "Internally, it must promote cohesion, despite the many events that threaten the EU core." (Staníčková, 2018, p. 1351) Several authors have highlighted the lack of information on European policy. Lincényi and Fabuš (2012, p. 169) pointed out the discrepancy of political communication in the mass media from European politics than from Slovak politics, as citizens learn more information from the National Council of the Slovak Republic than from the European Parliament. At present, many experts believe that opinion polls are using as a tool for public manipulation. One of the conditions for prevention against the effects of manipulation is the way and effectiveness of education. "In addition to general education, account should also be taken of the possibility of an education that specifically focuses on media literacy of media recipients and on improving their ability to detect media manipulation." (Môcik, 2019, p. 147)

2. Problem Formulation and Methodology

The main objective of the submitted research was to analyse the current public opinion of Slovak citizens with a focus on trust in politics and politicians. Secondary research aimed to look for opportunities to increase the participation of Slovaks in politics, including higher participation of Slovaks in European elections. In the case of further planning and design of research, we preferred the concept of research questions to the identification of research problems. We identified the following two research questions (RQ):

- RQ1: What is the participation of Slovak citizens in political life?

Explanation of RQ1: We think that the Slovaks are the most active in the parliamentary and presidential elections and the least in the European elections.

- RQ2: What criteria influence the credibility of political institutions or politicians in the eyes of Slovak citizens?

Explanation of RQ2: We believe that the Slovak public is mostly influenced by the fulfilment of political promises when it comes to credibility.

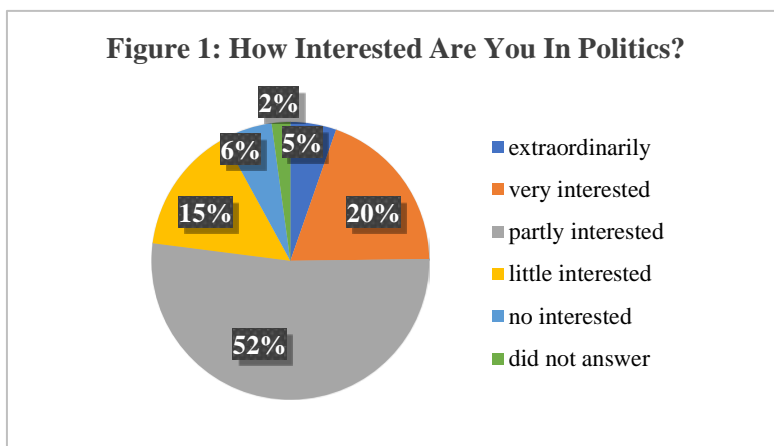
We used the questionnaire as the primary research method for data collection. The survey was administered by 50 trained and experienced interviewers personally in the field. The survey was conducted in the first quarter of 2019 on a sample of 879 respondents. The research sample consisted of 397 men and 480 women, while two respondents did not state their gender. Looking more specifically at the age-specification of the research sample, 288 respondents were 18 to 25 years old, 215 were 26 to 35 years old, 148 were 36 to 45 years old, 90 were 46 to 55 years old, 66 were 56 to 65 and 62 subjects were age 65 and more, with ten respondents that didn't state how old are they. Research group respondents came from all regions of the Slovak Republic: Bratislava Region (47), Trnava Region (65), Nitra Region (44), Trenčín Region (456), Žilina Region (91), Banská Bystrica Region (70), Košice Region (82), Prešov region (22), while two respondents did not specify the region of origin.

2.1 Model and Data

Research has shown that politics are not a priority in the lives of most addressed Slovaks. More than half of respondents are partly interested in politics (52%), while a quarter of respondents

are more interested (20%), and 5% are interested particularly. The remaining respondents have little or no interest in politics. (See Figure 1 for more information)

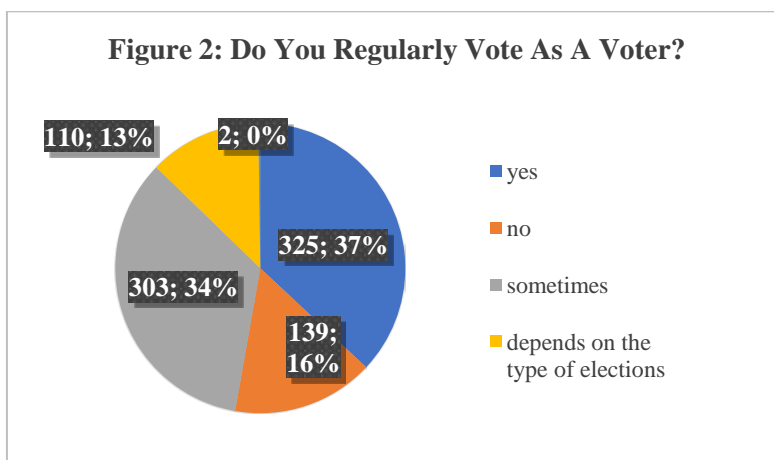
Figure 1: How Interested Are You in Politics?



Source: Based on own research results

Slovaks are slightly more interested in politics in the case of elections. One-third of respondents regularly participate in elections as a voter (37%), another third of respondents sometimes participate in elections (34%); The remaining 16% of respondents stated that they did not vote regularly. (More in Figure 2)

Figure 2: Do you Regularly Vote as Voter?

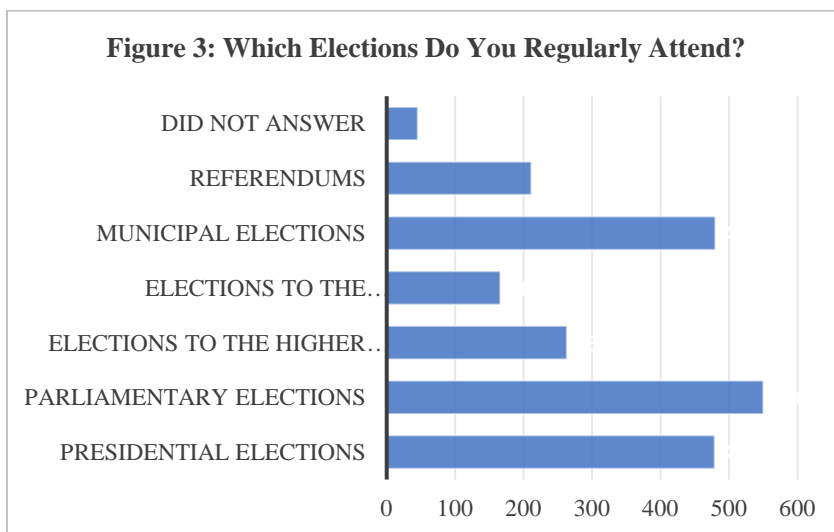


Source: Based on own research results

In the following question, we found out which elections citizens most regularly attended, more than one answer could be picked on this issue. Research has shown that Slovaks participate most in parliamentary elections (550 respondents), municipal elections (480) and presidential elections (479 respondents). On the contrary, the least interest is in the elections to the European Parliament (166 respondents), in referendums (211) and also in elections to higher

territorial units (263 respondents). The remaining 45 respondents did not answer this question. (See Figure 3)

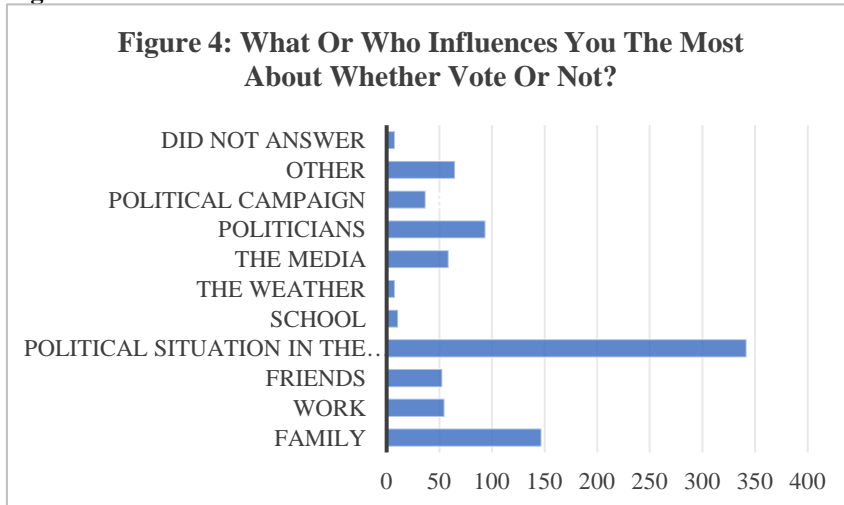
Figure 3: Which Elections do You Regularly Attend?



Source: Based on own research results

Furthermore, we asked what influenced respondents the most in deciding to vote or not to vote. The carried out research clearly showed that the Slovaks (342 respondents) are mostly making decisions according to the current political situation in the country. Respondents are also influenced by other factors: family - 147 respondents, politicians - 94 respondents. According to other respondents, weather (8 respondents), school (11) or political campaign (37 respondents) have the greatest influence on voting. (More information in Figure 4)

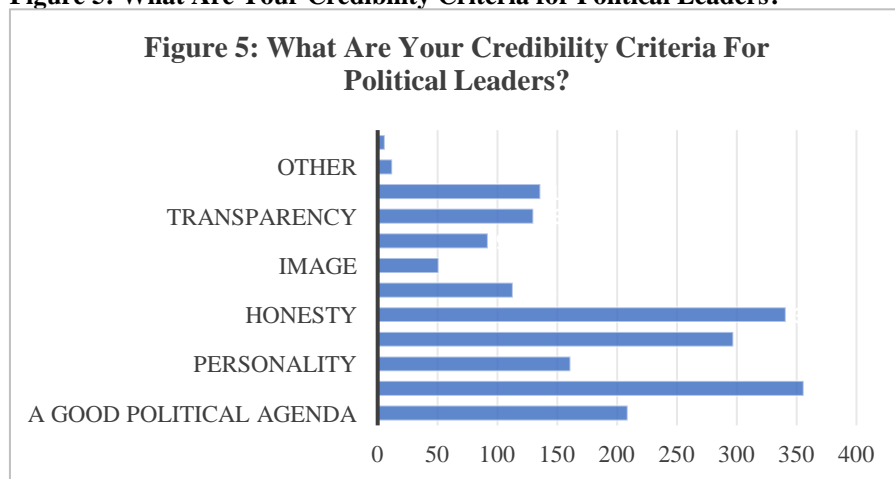
Figure 4: What or Who Influences You the Most about Whether Vote or Not?



Source: Based on own research results

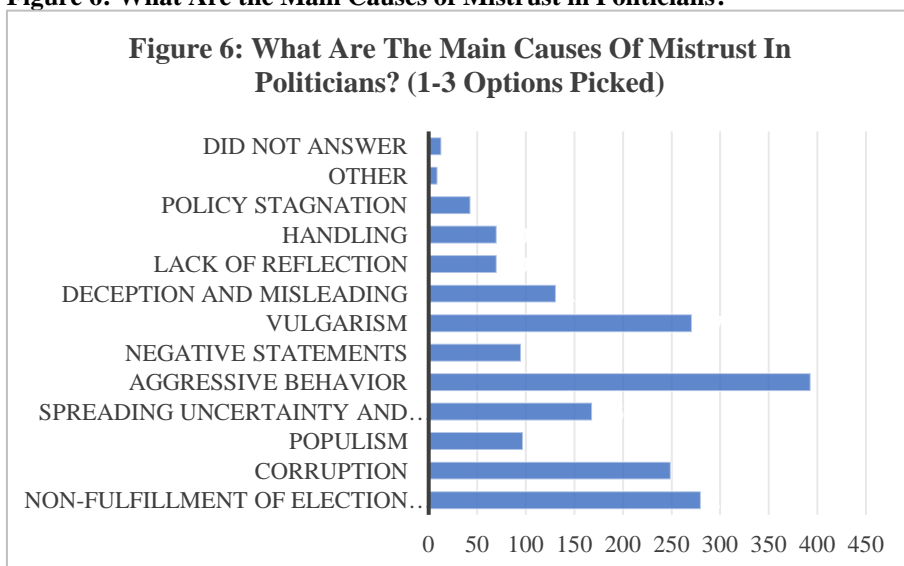
In the following question, we found out according to which criteria the Slovaks trust or do not trust politicians. Research shows that people trust politicians according to the fulfilment of promises (356 respondents), honesty (341 responses) and moral values (297 replies). The least essential criteria of trust in politicians are other (12 responses), image (51 replies), a low number of negative speeches (92 replies). Respondents could choose 1 - 3 answers. (See Figure 5 for more information)

Figure 5: What Are Your Credibility Criteria for Political Leaders?



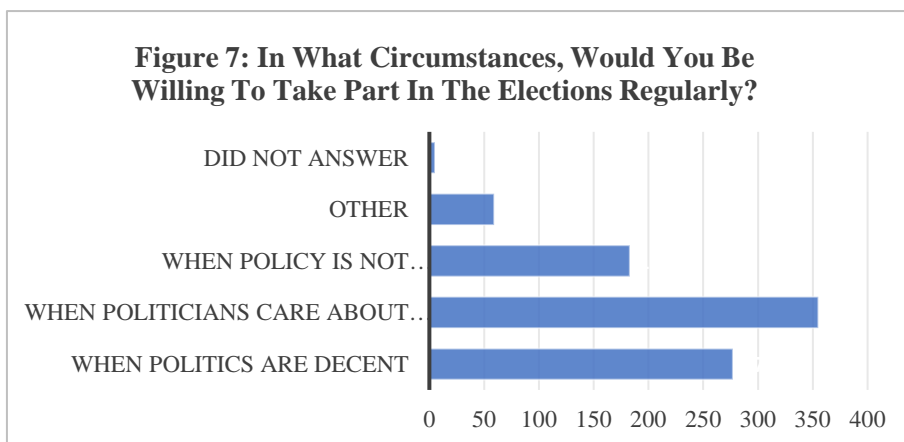
Source: Based on own research results

We also asked what the leading causes of the mistrust of people towards politicians are. According to the research, the most significant cause of mistrust towards politicians is aggressive behaviour (393 respondents), failure to fulfil election promises (280 answers) and vulgarism (271 responses). On the contrary, according to the people asked, mistrust of politicians is least caused by manipulation (70 responses), lack of reflection (70 responses) and other causes (9 respondents). Respondents could choose 1 - 3 answers. (See Figure 6 for more).

Figure 6: What Are the Main Causes of Mistrust in Politicians?

Source: Based on own research results

In the last seventh question, we found that the majority of respondents would be willing to take part in the elections regularly if politicians would care for ordinary people (355 respondents). (See Figure 7)

Figure 7: In What Circumstances, Would You be Willing to Take Part in the Elections Regularly?

Source: Based on own research results

3. Problem Solution

In the first research question, we investigated the participation of Slovak citizens in political life. We believed that the Slovaks were most active in the parliamentary and presidential elections and the least in the European elections. This claim was confirmed because research has shown that Slovaks are the most involved in parliamentary and presidential elections, with

the least interest in European elections. However, we should note that for most of the addressed Slovaks, politics is not a priority in their lives, because only 20% of respondents are very interested in politics. Only one-third of Slovaks regularly vote while another third of respondents vote sporadically. Also, an interesting finding is that the Slovaks are deciding whether they will vote in elections, mostly according to the current political situation in the country. In the second research question, we found out what criteria influence the credibility of Slovak citizens in political institutions or politicians. In this case, we believed that the Slovak public is influenced primarily by the fulfilment of political promises. This statement was confirmed because the Slovaks primarily trust politicians based on the fulfilment of their promises, honesty and moral values. On the contrary, the main three causes of mistrust of politicians are aggressive behaviour, failure to fulfil electoral promises, and vulgarity.

4. Conclusion

Several conclusions have emerged from this public opinion polls on the credibility of politics: The research confirmed the long-term low interest of Slovak citizens in European politics in the form of low participation in the European Parliament elections. There are several factors behind the low interest of Slovaks in the European elections. We believe that one of the key reasons is the lack of awareness about European policy. For this reason, as part of the project we are implementing, in the framework of innovation of methodological letters for teachers of civic education, we propose to devote more space to questions about European politics to explain the importance of the European Union and the functioning of its institutions for EU citizens. The research also brings exciting results regarding the credibility and untrustworthiness of politicians and institutions, but also the possible reasons for the higher participation of Slovaks in the elections, which can be inspiring not only for MEPs in Slovakia but also for the European Commission Representation in Slovakia. The research study carried out does not claim a comprehensive view of the public opinion of the Slovaks on the credibility or untrustworthiness of politicians. This research topic offers several other processing options. It would be interesting to compare the results of this research with the research of other member states of the European Union. We would thus learn more about the European citizen's view of political leaders and, at the same time, the style of policy that the European Union is pursuing. It would also be an exciting option to repeat the same research regularly.

Acknowledgements

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The Commodity and Territorial Structure of the EU Imports

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Abstract

The main objective of the paper is to examine the commodity and geographical structure of the EU imports of its 50 biggest trade partners and find out what role the European Union plays in the total exports of these countries. The results of the cluster analysis showed that for almost half of these importers, the European Union is an important trading partner. The EU has a very small share in the total exports of only few countries. According to the results of the analysis, the European Union imports from its largest importers mainly mineral fuels and high value-added products. These high-value-added products include mainly machinery and transport equipment and miscellaneous manufactured articles. Overall European Union imports from its 50 largest import partners are geographically relatively well-diversified except for imports of the mineral fuels.

Keywords: cluster analysis, European Union, exports, imports, international trade

JEL Classification: F10, F14, F50

1. Introduction

The European Union is the second-largest global player for international trade with a recorded total level of trade in goods of almost EUR 4,000 billion in 2018. The European Union alone represented more than 15% of global exports and 15% of global imports in 2018 (European Parliament, 2020). The European Union used to achieve even higher shares in international trade in the previous years. However, while it is true that the European Union, the United States, and China together account for more than 45% of world trade, while China as a trade empire is on the rise, the positions of the European Union and the United States are weakening. It is, therefore, more important than ever for the European Union to continue to establish and maintain strong trade relations with other countries to maintain its position in world trade. Since international trade is one of the most important drivers of economic growth allowing countries to raise living standards, provide employment for and increase countries' development it is also essential for the development of the European Union as a whole. Moreover, as mentioned in Chief Economist Note of the Directorate-General for Trade of the European Commission from 2019 Europe's economic prosperity is dependent on preserving its trade openness and strong international competitiveness (Cernat, 2019).

Achieving and maintaining a good position in the world market is not something a country can do on its own. The same applies to the European Union. Becoming successful in the world market is possible only through cooperation with other countries. Trade agreements are an essential tool in how countries build strong relationships with each other, expand the portfolio of their trade partners and this way intensify their trade. The European Union currently has about 90 trade agreements fully or partly in place and almost 50 pending or in the process of being negotiated. While these trade agreements often serve as a means to support the

development of underdeveloped countries or to establish closer political relations, their primary purpose is to ensure access to foreign markets and secure the country's supply.

As already mentioned, the European Union is one of the world's three largest exporters and importers at the same time. And while the exports of the European Union are a frequent subject of study, its role as an importer is often neglected in the literature. Therefore, this work fills a gap in the literature on the European Union as an importer and focuses mainly on the geographical and commodity structure of imports of the European Union.

In times of the shifting of global economic power and existence of uncertainty on the world market, countries need to ensure regular and secure imports of all products and materials that the country is not able to provide by itself. There are several reasons why countries import. Sometimes the country might not have sufficient resources or capacities to produce goods in demanded quantity to satisfy the needs of its citizens. And sometimes it might be more convenient to import goods due to production costs. Importing also allows the country to provide its citizens with a wider variety of goods for lower prices.

The main objective of the paper is to examine the commodity and geographical structure of imports from the European Union's 50 biggest importers and find out what role the European Union plays in total exports of these countries.

Based on the results of the cluster analysis of the EU importers will be sorted into groups based on the similarity of the commodity structure of their imports destined to the EU and the share of exports to the European Union in the total exports of the country. In this way we were able to identify what are the main product categories that the European Union imports from its biggest importers and how important the European Union is for these countries as an export market.

If the majority of the European Union importers are countries where the European Union has only a small share in the country's total exports and is therefore not an important export market, it is worth considering whether EU imports are indeed well secured. The high dependence of importers on the European Union guarantees it a stable position in the country's exports and security of product supply.

The desired situation is one in which the European Union imports are well diversified both in terms of commodity and geographical structure and the European Union is a major trade partner for its importers.

An undesirable situation arises when the European Union imports are heavily concentrated on a few product categories that are exported from countries for which the EU is only a secondary export market. This would mean that these import countries can easily shift their exports to other markets when disputes arise, the imports of the European Union can be at risk.

Two-thirds of imports of the European Union are raw materials, intermediary goods and components essential for EU manufacturers (European Commission, 2016). The disruption of inflow or raising the cost of imports would cause an increase in costs and lead to reducing the competitiveness of businesses of the EU. It is therefore also appropriate for relations with the largest importers of the European Union to be appropriately secured by trade agreements.

The first part, therefore, offers a brief description of trade agreements as a tool for establishing and consolidating the EU's trade relations with the outside world. The second part includes a literature review providing an overview of studies dealing with the trade flows and trade policy of the European Union. The next part describes the methodology used and the following part presents the results of the analysis. The findings are then summarized in the last part of the paper, i.e. in the Conclusion.

2. Trade Agreements of the European Union

Trade promotion has been one of the key areas since the beginning of European integration as European countries. The European Coal and Steel Community established in 1952 was the first institutional-based platform for European countries to fully develop their economic cooperation after the terrors of the Second World War. When the union of the six founding states - Belgium, France, Luxembourg, Germany, the Netherlands, and Italy has brought through the establishment of European Economic Community (EEC) the largest trading power of the world into being in Europe international trade has aroused a surprising measure of public interest. As Dahrendorf (1971) remarked a few years later, the EEC itself and its trading partners had also shown significant interest in international trade. By the active approach in the process of trade liberalization, the European Economic Community managed to refute its reputation as a self-centered, inward-looking organisation. Dahredorf also points out two reasons for the growing importance of foreign trade which results from the development of the EEC directly. The first reason is that after the completion of the customs union the trade policy has subsequently developed into foreign trade policy. The second reason was that the accession of the European Free Trade Association (EFTA) members in the following years automatically raised trade problems for the non-applicants in EFTA and overseas countries.

As the number of EU members increased, so did the demands for sophistication and flexibility of the EU's trade policy. Trade agreements have become one of the most important tools for establishing economic relations between the European Union and third countries. One of the most well-known trade agreements from the early years of the European integration was preferential agreements signed with the African, Caribbean and Pacific Group of States (ACP) ensuring the inclusion of the former colonies of the member states in the trade policy. These agreements have become a cornerstone for the creation of the intricate system of EU trade agreements. In subsequent years the European Community signed several agreements with non-member countries from its close surroundings. As Nacewska-Twardowska (2014) observed, trade agreements up to the mid-'90s had been concluded mainly for political and security reasons. However, in the early years of the twentieth-century trade agreements had been concluded rather for commercial rather than political purposes. The main motives behind trade agreements were neutralizing potential trade diversion, forging strategic links with partners enjoying rapid economic growth and implementing international trade rules. These motives, together with the aim of increasing the economic wealth of countries, prevail as the main motive for the conclusion of trade agreements to this day. The geographical scope of trade agreements has also changed significantly over the years. Whereas in the early years the European Union focused more on establishing relations specifically with former colonies, candidate countries or immediate neighboring countries, later it has also shifted its attention to far more distant countries that offered trade potential.

The European Union maintains relations with third countries through the three basic categories of trade agreements (Europa, 2019):

- Customs Unions Agreements,
- Association Agreements, Stabilisation Agreements, (Deep and Comprehensive) Free Trade Agreements and Economic Partnership Agreements,
- Partnership and Cooperation Agreements.

However, each new trading partner of the EU was unique, so if the European Union wanted to establish solid relations with various countries, it often required tailor-made trade agreements. That is why there are many specific types of trade agreements concluded by the European Union today. The European Union has concluded various types of trade agreements with 42 countries out of the 50 countries we surveyed. These trade agreements differ to a lesser or

greater extent. There may be differences in areas of cooperation, depth of cooperation, reciprocity or given constraints, etc.

3. Literature Review

Literature studying the role of the European Union as a global importer is very rare. Among scarce literature dealing with the European Union's imports belong, for example, a study of Baer-Nawrocka and Mrówczyńska-Kamińska (2019) assessing the measures of direct material and import intensity in the agriculture of the European Union countries. Cirovic et al. (2015) in his study measuring energy security of countries of the European Union and their dependency on external sources noted that more than 50 % of petroleum products that the EU imports come from Norway and the Russian Federation. Cirovic also draws attention to increasing EU oil dependency in the future and thus the importance of import diversification. Schüler (2017) focuses on EU raw material import flows and analyses the import structure of selected metals and the connections between specific resource-rich countries and the EU. In the study, he reveals South America's prominent role for European imports of lithium, iron, and copper and China's and Russia's important role in imports of processed goods.

Studies on the EU's exports are much more common. Fojtková (2011; 2012) and Priede and Pereira (2015) explore the performance of the European Union's export in the context of competitiveness targets enclosed in the Europe 2020 strategy. In the findings, they emphasize the tendency of the European Union's exports to gradually decline and changes in export market structure in favor of markets like Turkey, India, Brazil, the United Arab Emirates, South Korea, and Saudi Arabia. The export patterns of the European Union are studied by Gracinda and Santos (2013) who assess if the commodity and the geographic structure of exports can shape the growth dynamics of the EU countries. The results suggest that both commodity and destination structure can indeed affect the growth dynamic of the European Union. Gracinda and Santos also state that economic growth performance is enhanced if countries specialize rather than export a large set of products. Regarding destination diversification, although the higher growth is supported by the diversification of exports among a larger number of partners, the expansion of the portfolio of partners to less developed or remote countries has negative impacts on European growth. Sertić's study (2013) provides an analysis of the determinants of export performance of the European Union members with results showing the positive and statistically significant impact of industrial production and domestic demand on total and high-tech manufacturing exports of the EU. In the study focused on the performance and growth of the Eurozone exports, Fojtková (2014) introduces that the factors of the growth of the euro area's export in 1999-2012, which have shown themselves to be statistically significant, were the size of economies and the exchange rate.

Trade flows of the European Union are most often studied in connection with the impacts of trade agreements. Studnicka (2019) studies the impact of European regional trade agreements on European export patterns and concludes that the EU does not export more to trading partners it concluded deeper trade agreements with. However, when assessing the impacts on all EU member states separately, the heterogeneity of these impacts among EU exporters is found. A similar study on the impacts of regional trade agreements on EU trade flows was conceived by Altenberg (2019). According to the results of this study trade between the EU and its partners increase by 48 percent on average thanks to regional trade agreements. In some cases, the trade effect might reach 65 percent after ten years of operation of the given regional trade agreement.

Focusing on specific trade agreements Dadush and Myachenkova (2018) assess the effects of trade agreements that the European Union has with North African. While the European Union's exports to West Africa after the introduction of the agreements have seen a relatively

significant increase, imports from West Africa to the EU have not shown any significant change. Francois (2007) analyzes the effects of a trade agreement between the European Union and South Korea with positive results of an increase in trade flows for both economies. In connection with trade negotiations, studies focused on the EU untapped trade potential, for example to Russia (Fojtíková, 2013), are also beneficial.

4. Methodology

The groups of importers of the European Union were created based on the results of the cluster analysis. The main criteria for sorting countries into groups were the structure of their exports to the European Union and the share of the exports to the EU in their total exports. Cluster analysis is a multivariate statistical method that aims to find clusters of objects in a given set of objects so that the members of the cluster are similar to each other, but they are different from objects outside the cluster (Bijnen, 1973). This means that the similarity of two objects belonging to one group is maximal, while the similarity to objects outside this cluster is minimal. Algorithms of cluster analysis can be divided into hierarchical and non-hierarchical. As the name suggests, non-hierarchical methods do not create a hierarchical structure. They break down the original set of objects into several disjoint clusters to meet a certain criterion. Hierarchical methods create clusters that have different hierarchical levels. This means that clusters of lower hierarchical level are included in higher-level clusters.

To generate desired groups, we used hierarchical agglomerative cluster analysis. We chose this method because in hierarchical clustering we do not have to determine the exact number of clusters at the beginning. Instead, we can determine the appropriate number of clusters during the clustering. Hierarchical methods can be divided into agglomerative and divisional.

At the beginning of agglomerative clustering, which is the one that we used, each object acts as a separate individual cluster. The initial number of clusters n equals the total number of cases and similar objects are merged together. In the following steps, the other similar cases or clusters are merged together until every case is grouped into one single cluster. Divisional hierarchical clustering works in the reverse manner as all objects start in one large cluster. This cluster is in the following steps gradually divided into smaller groups of clusters. The algorithm ends when all objects are in individual clusters (Yim and Ack Baraly, 2015).

As a linkage method for the evaluation of similarity between clusters, we chose the Ward method. The Ward method is suitable when working with objects that have the same dimension of variables and is also said to be the most suitable method for quantitative variables. The variables used in our analysis meet the requirements of the Ward method, so we adhered to this method in our analysis.

Ward method is calculated as

$$\Delta(A, B) = \sum_{i \in A \cup B} \|\vec{x}_i - \overrightarrow{m_{A \cup B}}\|^2 - \sum_{i \in A} \|\vec{x}_i - \overrightarrow{m_A}\|^2 - \sum_{i \in B} \|\vec{x}_i - \overrightarrow{m_B}\|^2 \quad (1)$$

$$= \frac{n_A n_B}{n_A + n_B} \|\overrightarrow{m_A} - \overrightarrow{m_B}\|^2 \quad (2)$$

where $(m_j)^\rightarrow$ presents the centre of cluster j , and n_j is the number of points in it. Δ is the merging cost of combining clusters A and B .

As a distance measure we used the Square Euclidian Distance, which is measure proposed for the Ward's method and also the most suitable when working with interval data. According to

Sakthivel (2015) squared Euclidean distance is the sum of the squared differences between scores for two cases on all variables calculated as

$$d(i, j) = \sum_{k=1}^n (X_{ik} - X_{jk})^2 \quad (3)$$

where $i = X_{in}$ and $j = X_{jn}$ are two n dimensional data objects.

The objects surveyed in our analysis are 50 countries, which in 2018 belonged among the largest importers of the European Union.

The variables on the basis of which the groups of these countries were created are the shares of the individual product categories in the total exports of the countries concerned in 2018.

These product categories are based on the Standard International Trade Classification (SITC) on a one-digit level (United Nations, 2019).

These categories are:

- food and live animals (SITC 0),
- beverages and tobacco (SITC 1),
- crude materials, inedible, except fuels (SITC 2),
- mineral fuels, lubricants, and related materials (SITC 3),
- animal and vegetable oils, fats and waxes (SITC 4),
- chemicals and related products (SITC 5),
- manufactured goods classified chiefly by material (SITC 6),
- machinery and transport equipment (SITC 7), and
- miscellaneous manufactured articles (SITC 8).

All data on country exports were obtained from UNCTADstat, i.e. the statistical database of the United Nations Conference on Trade and Development.

5. Results

To analyze the structure of the imports originating from the European Union's biggest importers and to find out the importance of the European Union for these countries in terms of trade we merged the 50 biggest importers into several groups.

For each group applies that countries included in it have the same main product category that makes up the largest share of their exports destined to the European Union and the similar share of the exports to the European Union in their total exports.

Based on the import data of the European Union from 2018 the six groups of countries were generated.

The first group includes seven countries all of which are strongly oriented towards exporting mineral fuels, lubricants, and related materials to the European Union. In fact, mineral fuels exported to the European Union account for around 60% of their total exports. Out of the 50 largest European Union's importers, these are the countries whose exports are most concentrated and dependent on the EU. Of these seven countries, six have concluded a trade agreement with the European Union. The deepest cooperation has been established with Norway within the European Economic Area. Libya has no trade agreement with the EU. Relations with other countries are regulated mainly through the Partnership and Cooperation Agreement, in the case of Nigeria through the Economic Partnership Agreements within the framework of ACP preferences.

The second group consists of seven countries whose largest share of exports to the EU is also made up of mineral fuels, lubricants, and related materials. However, unlike the first group, for these countries, the importance of the European Union as an export market is significantly lower. Approximately 20% of the total exports of these countries is exported to the European Union. With the exception of Iran, all countries in the group have concluded some sort of trade agreement with the EU.

The third group is by far the largest and includes 25 countries. The countries belonging to this group export approximately 20% of their total exports to the European Union. As for the structure of exports to the EU, the machinery and transport equipment are most represented. Compared to the previous groups their exports to the European Union are quite well diversified. The EU has no trade agreement with 6 of these 25 countries. With the rest of the countries, the EU has concluded Free Trade Agreements and Partnership and cooperation agreements and Association Agreements.

The fourth group includes only two countries, namely Bangladesh and Cambodia both of which have concluded the Cooperation Agreement with the EU. For these countries, the European Union as an export market is very important, with over 60% of their total exports going there. This 60% were made up of miscellaneous manufactured articles and other product categories accounted for only a negligible part of exports.

The fifth group comprises eight countries. These countries are also quite strongly focused on exporting to the European Union. Their exports to the European Union are well diversified, with a particular focus on exports of high value-added products, i.e. machinery and transport equipment, and other manufactured goods. Bosnia and Herzegovina, as a potential candidate for the EU membership, has a Stabilization and Association Agreement with the EU. The other country in this group, Pakistan, has a Cooperation Agreement concluded with the EU.

The last group is made up of only one country, the Ivory Coast. Ivory Coast mainly exports food and live animals to the European Union, with around 50% of its total exports going to the European Union. Ivory Coast as an ACP member has concluded the Economic Partnership Agreement with the EU.

For eighteen countries, the European Union is a important export market with the EU's share in its exports higher than 40%. For eight of them, the European Union's share in total exports of these countries reaches more than 60%. For ten countries, the European Union is only a secondary export market to which less than 10% of its total exports are directed. The remaining countries reported a moderate dependence on their exports to the EU.

Table 1 shows the different groups of countries and their common features, i.e. the product category that makes up the largest part of the country's exports to the European Union and the importance of the European Union as an export market for these countries.

Table 1: Groups of Countries Based on the Results of the Cluster Analysis

Main product category exported by countries to the EU					
SITC 3	SITC 3	(SITC 7)	(SITC 8)	(SITC 6, 7, 8)	SITC 0)
Importance of the EU as an export market for countries					
Very High	Low	Very Low		High	Medium
1st group	2nd group	3rd group		4th group	5th group
Algeria	Angola	Argentina	Japan	Bangladesh	Bosnia and Herzegovina
Azerbaijan	Colombia	Australia	South Korea	Cambodia	Morocco
Kazakhstan	Egypt	Belarus	Malaysia		North Macedonia
Libya	Iran	Brazil	Mexico		Pakistan
Nigeria	Iraq	Canada	Peru		Serbia
Norway	Qatar	Chile	Philippines		Switzerland
Russia	Saudi Arabia	China	Singapore		Tunisia
		Hong Kong	South Africa		Turkey
		Taiwan	Thailand		
		India	Ukraine		
		Indonesia	UAE		
		Israel	USA		

Source: Own creation based on the results of the cluster analysis

6. Conclusion

The European Union is with its more than 500 million citizens one of the largest importers in the world. Ensuring that its citizens receive goods they need in sufficient quantity and quality is one of its main goals. However, not all products consumed in the European Union must necessarily also be produced in the European Union. Some products might be due to different reasons more convenient to import from non-EU countries. The value of the EU's imports of goods reached around EUR 2 000 billion in 2018 (European Parliament, 2020).

When analyzing imports from the 50 countries that were the largest importers of the European Union in 2018, we found out the following:

For almost half of these countries, the European Union is an important trading partner, through whose imports these countries can increase their economic growth. The greater the European Union's share in the country's exports, the more likely it is that the country will endeavor to maintain good relations with the European Union so as not to disrupt the flow of imports to the EU.

For the majority of remaining countries, the EU is of moderate importance as an export market. Only in a few countries, the European Union has a very small share of total exports. Since only a small share of these countries' exports go to the European Union, it is likely that if relations

with the European Union were disrupted, it would not be difficult for them to redirect these exports. By ensuring strong trade cooperation, the European Union could increase its share in total exports of these countries and become a key trade partner for them which would contribute to the security of imports from these countries.

As for the import structure of the European Union, we have found that the European Union mainly imports mineral fuels and high value-added products from its largest importers. These high-value-added products include mainly machinery and transport equipment and miscellaneous manufactured articles. Product categories such as live animals, beverages and tobacco, and animal and vegetable oils, fats and waxes, account for only a very small part of European Union imports.

Imports from countries that focus on exports of more processing-intensive products to the European Union, such as product categories SITC 5, 6, 7 and 8, are fairly well diversified among these categories. Imports of the countries that import mainly mineral fuels into the EU are in most cases highly concentrated and the other product categories make up only a small part of these imports. The diversification of imports is directly related to the ability of countries to experience welfare and productivity gains resulting from the increasing diversity of imported goods.

Overall European Union imports from its 50 largest importers partners are geographically relatively well-diversified. Well-diversified are especially product categories such as chemicals, manufactured goods, machinery, and transport equipment and miscellaneous manufactured articles that the EU imports from a large number of countries. The situation is worse for mineral fuels, which are imported by the EU from only a few countries. This finding corresponds to the already well-known fact that the European Union is partly dependent on energy sources from third countries. It is therefore important to ensure relations with these countries through appropriate trade agreements to facilitate the development of trade cooperation. The findings from this paper will serve as a basis for further research on the effects of unilateral preferences examined using econometrics.

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Sustainability of Health Care Systems in the Countries of the European Union

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Abstract

The type of health system, along with the resources used within it, and additional factors determine the health outcomes (health status) achieved by countries. The relationships between healthcare expenditure and health outcomes, represented by life expectancy at birth, healthy life years, and the share of people with good or very good perceived health, were investigated in the sample of 31 countries (the European Union (EU-28) plus Iceland, Norway, and Switzerland) from the point of view of both efficiency and sustainability. Hierarchical cluster analysis (HCA) was applied. Norway, Malta, Sweden, Iceland, Ireland, Italy and Cyprus achieved the highest performance.

Keywords: *current health care expenditure, healthy life years, hierarchical cluster analysis, life expectancy at birth, sustainable development*

JEL Classification: *I10, I13, I15, I18, Q01*

1. Introduction

The rationale behind this research lies in a consideration of the concept of sustainable development (SD). According to the most quoted definition of the World Commission on Environment and Development (WCED, 1987), SD is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This concept has become a philosophy determining and affecting activities in all economic sectors, as well as the lives of individuals and communities. It is a vital concept, aimed at maintaining people's wellbeing for an unlimited period of time. Health is as an essential constituent of people's wellbeing (see more in Drastichová (2018b)). It is a central part of the social pillar of SD. Other crucial aspects in this pillar, such as poverty, education (see e.g. Halásková and Schwarzová (2018)), gender equality, must also be considered. Nevertheless, these aspects need to be analysed in the context of the three-pillar approach to SD, which is based on that view of SD which refers simultaneously to economic, social and environmental systems, all of which must be sustainable at the same time. Accordingly, these three dimensions, along with the institutional pillar of SD (see e.g. Ardielli (2019)), are interlinked and crucial to wellbeing. All the dimensions, including the spatial dimension (see more in Sucháček et al. (2018)), their subject matter, and their interconnections must be considered in the preparation of policies and strategies aimed at SD.

The EU, in coordination with its Member States, is committed to supporting the implementation of the 2030 Agenda, which is a recent policy framework worldwide for SD. It is represented by the 2030 Agenda for SD and its 17 Sustainable Development Goals (SDGs) (adopted by the United Nations (UN) in September 2015). The progress towards the SDGs in

an EU context is monitored by means of the EU SDG indicator set. SDG 3 involves the aspects of health and wellbeing analysed in this work. It aims to ensure health and well-being for all at all ages (other topics are also included in particular SDGs, see more on Eurostat (2020a)). The aim of this work is to discover relationships between the selected indicators reflecting health outcomes (health status) and healthcare resources in the sample of 31 countries, including the EU-28 plus Iceland, Norway and Switzerland, and to evaluate the performance of these countries. Hierarchical cluster analysis (HCA) is applied to the data for indicators in the sample for 2010, 2014, and 2017. In addition, countries are also clustered according to all data for these three years.

1.1 Theoretical Background and Literature Review

The performance of countries' health systems can be evaluated according to the relationship between its resources and outcomes. Not only efficiency, but also sustainability of health systems is crucial. However, Drastichová (2019) concluded that in the sample of 31 countries analysed the particular healthcare system model did not determine performance significantly. Therefore, the type of expenditure reflected by each model is not used in this analysis. In the literature, different estimation methods, such as cross-sectional analysis, or panel, autoregressive distributed lag model, have been used to analyse the relationship between healthcare expenditure and health status outcomes (Rahman et al., 2018). Nixon and Ulmann (2006) confirmed that establishing causal relationships between health expenditure and health outcomes is complex and difficult because healthcare expenditure is only one of many quantitative and qualitative factors that contribute to health outcomes, and measurement of health status is an imperfect process. Therefore, cluster analysis (CA) can be an appropriate tool to discover relationships between these indicators. The innovation of this study lies in the inclusion of a combination of one objective quantitative indicator, one objective qualitative indicator and one subjective indicator reflecting health outcomes (health status), along with the indicator reflecting healthcare resources. An approach based on an HCA applied to the data on healthcare inputs and outcomes follows the previous author's works in this field (Drastichová, 2018a, b; Drastichová, 2019).

In Drastichová (2019), the same sample of 31 countries was clustered according to indicators reflecting these three aspects, as well as standards of living, to discover the extent of the relationships between these factors in these countries. The indicators used to reflect health outcomes were life expectancy at birth (LE); healthy life years in absolute value at birth for females (HLYf) and for males (HLYm); and death rate due to chronic diseases (DR). Concerning healthcare inputs (resources), the indicator used is current healthcare expenditure (CHE) (percentage of GDP). Two partial expenditure ratios in classification by healthcare financing schemes were also used to reflect prevailing healthcare system models. The core cluster 2 countries (the new member countries, apart from Malta, Cyprus and Slovenia), were the worst performing countries. Cluster 1, containing the core developed countries – Austria, Germany, France, Switzerland and the Benelux countries, was evaluated as the second-best performing cluster in both years, although its average CHE ratios and GDP per capita were the highest. On the other hand, countries, which shifted from cluster 4 to cluster 3, referred to as cluster 4-3 countries (Iceland, Ireland, Malta, Norway and Sweden) were evaluated as the best performing countries, along with the core cluster 3 countries (Italy and Spain), and Cyprus.

2. Problem Formulation and Methodology

In this section, the methodology applied, the source of data, and the indicators used (including the rationale behind their selection) are introduced.

2.1 Data

Health outcomes/health status are represented by three indicators. Two of them predominantly reflect objective aspects. The first indicator applied is life expectancy at birth (LE). LE is defined as the mean number of years that a new-born child can expect to live if subjected throughout his life to the current mortality conditions (age specific probabilities of dying). Healthy life years (HLY) is the second indicator used. It measures the number of remaining years that a person of specific age is expected to live without any severe or moderate health problems. HLY is a composite indicator that combines mortality data with health status data. It is separately calculated for men and women. The share of people with good or very good perceived health (PH) indicator is a subjective measure on how people judge their health in general on a scale from "very good" to "very bad". It is expressed as the share of the population aged 16 or over perceiving itself to be in "good" or "very good" health (Eurostat, 2020a, b). LE and PH indicators are included in the EU SDG indicator set to monitor progress towards SDG 3 on good health and wellbeing (Eurostat, 2020a). LE predominantly reflects quantitative aspects of health, while in HLY and PH qualitative aspects are also included. HLY focuses on the quality of life spent in a healthy state, rather than the quantity of life, as measured by LE. The PH indicator also reflects qualitative aspects; although it is a subjective indicator. Current healthcare expenditure (CHE) (percentage of GDP) is the indicator chosen to reflect healthcare inputs (resources) (WHO, 2020). Data missing for indicators of certain countries for certain years were replaced with the last available data (from the previous year).

2.2 Methodology and Model

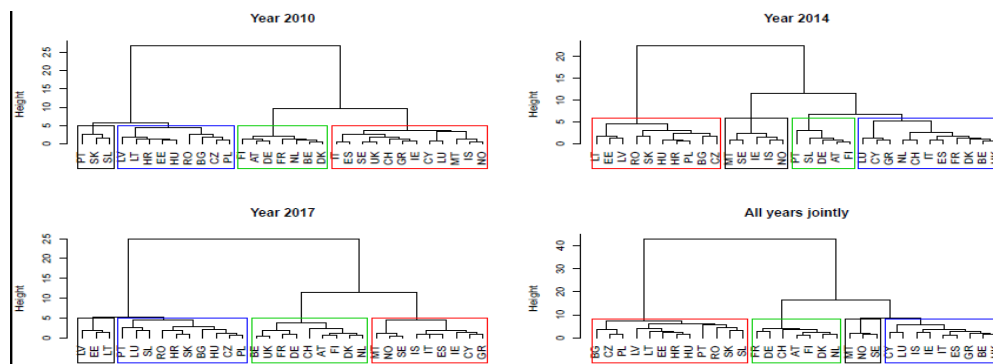
HCA is applied as a main method in this work. CA is a multivariate statistical method and it is a useful technique for the identification of structures within the selected dataset. It organizes the observed cases into homogenous groups and it does not require any prior knowledge of which object belongs to which cluster. The degree of association between two objects is maximal if they belong to the same group and minimal otherwise. For grouping objects of similar kind into categories, different algorithms and methods can be used. HCA is applied in this work. HCA of n objects is defined by a stepwise algorithm which merges two objects at each step, the two which have the least dissimilarity or distance (Everitt, 1993). Different objects, i.e. the 31 countries of the sample in this analysis, are sorted by means of CA. Since quantitative variables are used, the squared Euclidean distance was chosen from the measures for interval to measure distance. Ward's method is used as a cluster method to determine which clusters should be joined at each stage (Aldenderfer and Blashfield, 1984). Finally, Z scores are applied as a standardization method, since the variables used are measured in different units (see more in Drastichová (2019)).

3. Problem Solution

Five indicators were used to classify the sample of 31 countries into four clusters by means of the HCA. There were four indicators for health outcomes (health status) and one for healthcare resources (described in subsection 2.1). Cluster dendrograms for individual years and for the whole period are displayed in Figure 1. A four-cluster model was chosen as the appropriate solution (based on the corresponding dendrograms, as indicated in Figure 1). It can be seen in both Figure 1 and Table 1 that although assignments to clusters between the years changed, particular countries were close to one another in particular years and also for all indicator values (in all three years), such as Italy and Spain, Austria and Finland, or three Baltic countries. The countries that remained in the same cluster in each year as well as in the whole period are referred to as the core countries of that cluster. Descriptive statistics for the created clusters are displayed in Tables 2 and 3, and the features of clusters are derived from these

values. For analysis of the whole period (all indicator values), only the values of descriptive statistics in the year 2017 are displayed.

Figure 1: Cluster Dendrograms Created for the Values of the Indicators Used in 2010, 2014, 2017 and All the Years Collectively



Source: author's calculations in R (2020)

Note: cluster 1 – green; cluster 2 – blue; cluster 3 – red; cluster 4 – black.

As regards the analysis in the individual years, cluster 1 exhibited the highest mean values of CHE ratio in each year. Nevertheless, its mean values of the other indicators reflecting health status were never the highest. The second highest values were achieved only in 2017 for all the indicators and in 2010 for almost all the indicators, with the exception of HLYf (the second lowest mean value). The composition of cluster 1 has the features of the second worst performing cluster in that year (the lowest mean HLY values, the second lowest LE and PH values, along with the highest CHE ratio). Cluster 2 predominantly contained the new member countries, i.e. the less developed EU countries (2010 and 2017). However, in 2014 and in the whole period, the composition of cluster 2 is quite different. In 2010, it was the worst performing cluster, exhibiting the lowest average LE, PH and CHE ratio. HLYm and HLYf were the second lowest and the second highest respectively. In 2017, all the mean values in this cluster were the second lowest, while the three poorly-performing Baltic counties formed a separate cluster (the worst performing – cluster 4) in this year (see Figure 1 and Table 1).

Table 1: The Composition of the Clusters in the Individual Years and the Whole Period

	Cluster 1	Cluster 2	Cluster 3	Clust. 4
2010	AT, DE, DK, FR, NL, BE, FI	BG, CZ, EE, HR, HU, LV, LT, PL, RO	CH, CY, ES, GR, IE, IS, IT, LU, MT, NO, SE, UK	PT, SK, SL
2014	AT, DE, FI, PT, SL	BE, CH, CY, DK, FR, GR, IT, LU, NL, ES, UK	BG, CZ, EE, HR, HU, LT, LV, PL, RO, SK	IE, IS, MT, SE, NO
2017	AT, BE, CH, DE, DK, FI, FR, NL, UK	BG, CZ, HR, HU, LU, PL, PT, RO, SK, SL	CY, GR, IE, IS, IT, MT, NO, ES, SE	EE, LT, LV
Overall	AT, CH, DE, DK, FI, FR, NL	BE, CY, GR, LU, ES, IE, IS, IT, UK	BG, CZ, HR, HU, EE, LT, LV, PL, PT, RO, SK, SL	MT, SE, NO

Source: author's calculations in R (2020)

In 2010 and 2017, cluster 3 was the best performing cluster, exhibiting the best average results of all the included health status indicators, but the second lowest (2010) and the second highest (2017) CHE ratios. As it was indicated, the composition is quite different in 2014 and for the whole period. In 2014, cluster 3 was the worst performing cluster having the second lowest average HLY values and the lowest values of the remaining indicators. The composition of cluster 4 changed significantly over the years. It includes different countries in each year analysed, and only three countries from 2014 were there in the analysis of all indicator values. This cluster exhibited the lowest mean values of all indicators in 2017, when only three Baltic countries are included there. In this year, it is the worst performing cluster. On the other hand, it is the best performing cluster in 2014 with the best results in health status indicators. Only LE is slightly lower than that of cluster 2 and the CHE ratio is slightly lower than that of cluster 1. The composition of this cluster in 2010 reflects the lowest performance (the lowest HLY values, the second lowest LE and PH, and the second highest average CHE ratio. Cluster 1 is the second-best performing cluster and cluster 2 the second worst performing in 2010 and 2017, while the opposite is true in 2014. The five countries included in 2014 exhibited very low HLY values (see Figure 1 and Table 1).

Table 2 Mean Values for Four Clusters: 2010, 2014, 2017, and the Whole Period

Ind.	10/1	10/2	10/3	10/4	Ind.	14/1	14/2	14/3	14/4
HLYm	60.743	57.71	66.33	55.03	HLYm	57.760	63.45	57.95	71.04
HLYf	60.714	60.81	66.34	54.43	HLYf	57.360	62.91	60.23	70.42
LE	80.543	75.04	81.48	78.50	LE	81.320	82.19	76.37	82.18
CHE	10.258	6.793	8.716	8.737	CHE	9.671	9.300	6.601	9.552
PH	70.414	56.68	75.76	57.56	PH	63.000	73.31	57.68	78.12
Ind.	17/1	17/2	17/3	17/4	Ind.	17w/1	17w/2	17w/3	17w/4
HLYm	61.467	59.13	69.02	53.90	HLYm	60.914	65.62	57.74	72.50
HLYf	60.644	59.45	68.74	56.40	HLYf	59.957	65.21	58.80	72.00
LE	81.856	78.32	82.50	76.36	LE	81.971	82.21	77.51	82.53
CHE	10.521	7.008	8.751	6.281	CHE	10.674	8.156	6.953	10.26
PH	72.244	63.10	76.91	46.86	PH	71.586	75.88	58.37	76.46

Source: author's calculations in R (2020)

Note: 10, 14, 17: the years monitored; wh – the whole period; 1 – 4: cluster 1 – cluster 4.

In the analysis of the whole period, cluster 4 exhibited the highest mean values for almost all health status indicators. Only in 2010, a slightly higher value of PH was exhibited by cluster 2. However, its average CHE ratios were the second highest (2014 and 2017) or the second lowest (2010). This cluster is evaluated as the best performing cluster. The lowest average values of all indicators were in cluster 3, which is the worst performing cluster. The only exception was the second lowest average HLYf in 2014. Its lowest mean value was in cluster 1. This cluster had the second lowest mean values of the remaining health status indicators. However, its average CHE ratios were the highest. Therefore, it is the second worst performing cluster. Finally, cluster 2 had the second highest mean values of health status indicators, with the exception of PH in 2010 (the highest). CHE ratios are the second highest (2010) and the second lowest (2014 and 2017). This is the second-best performing cluster according to all indicator values in all years included. Variabilities measured by standard deviation (StD) differ between clusters and years (see Table 3). In the analysis of individual years, low values can be seen in cluster 1 in 2010 and 2014, with the exception of the PH indicator in 2014. Conversely, relatively high values can be seen in cluster 3 in 2014 and cluster 4 in all the years for several indicators. For the analysis of the whole period, the results seem to be more homogenous. The StD values are relatively low in cluster 4 (the lowest for all indicators in 2017) and high in cluster 3. This variability is often high in cluster 1 as well, with the main

exceptions being the CHE ratio and HLYf (2010), and often low in cluster 2, with the main exceptions being HLYm (2017) and the CHE ratio (the highest StD value in each year). Considering these values, the differences between the indicator values of countries included in particular clusters can be better evaluated.

Table 3: Standard Deviations for Four Clusters: 2010, 2014, 2017, and the Whole Period

Ind.	10/1	10/2	10/3	10/4	Ind.	14/1	14/2	14/3	14/4
HLYm	2.213	3.254	2.250	3.729	HLYm	0.873	1.622	3.685	2.829
HLYf	1.979	3.534	2.640	2.354	HLYf	1.566	2.623	3.847	3.408
LE	0.768	1.690	0.713	2.516	LE	0.164	0.901	1.634	0.536
CHE	0.767	0.721	1.251	1.017	CHE	0.994	1.901	1.015	1.025
PH	4.155	7.915	5.122	7.433	PH	9.767	3.612	8.147	2.885
Ind.	17/1	17/2	17/3	17/4	Ind.	17w/1	17w/2	17w/3	17w/4
HLYm	2.550	2.383	3.401	2.982	HLYm	2.6579	3.431	3.396	0.655
HLYf	3.886	3.683	3.004	3.863	HLYf	4.1576	3.598	3.965	1.552
LE	0.843	2.630	0.572	1.818	LE	0.9322	0.727	2.301	0.152
CHE	0.962	1.182	1.405	0.282	CHE	1.0336	1.509	1.042	0.852
PH	4.560	6.655	2.756	4.881	PH	5.0422	3.423	9.070	1.006

Source: author's calculations in R (2020)

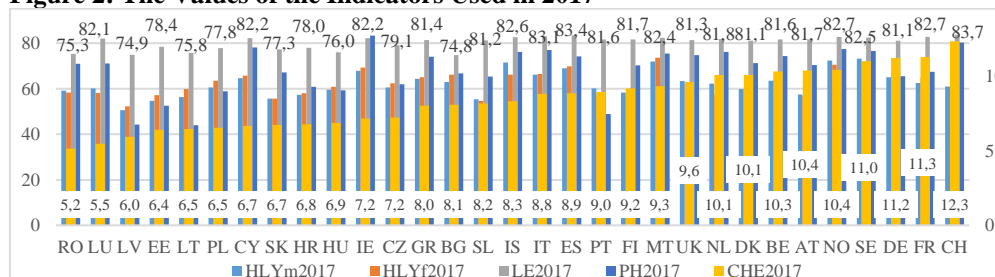
Note: 10, 14, 17: the years monitored; wh – the whole period; 1 – 4: cluster 1 – cluster 4.

Source: author's calculations in R (2020)

Finally, the performance of countries is evaluated on the basis of the previous results. The conclusions are similar to those of Drastichová (2019), although in that work the type of health system and standards of living were also included. On the other hand, the inclusion of the subjective indicator is the innovation of this analysis. Nevertheless, in comparison to that work, more changes in assignments of countries to clusters occurred between these years. The indicator values in 2017 are displayed in Figure 2 to simplify this evaluation. Three cluster 4 countries for the whole period, Malta, Norway and Sweden, along with Iceland and Ireland, are among the best performing countries. As regards the first group, their HLY indicators were among the highest. Only Sweden had slightly lower values in 2010, but significant increases occurred. LE and PH are among the highest in 2017. Malta experienced one of the highest increases in the PH indicator, which was lower in 2010, and Norway an increase in the LE indicator. The CHE ratio of Malta was the lowest in this group (see Figure 2). Ireland and Iceland were grouped with these countries together in the individual years. In 2014, these five countries created a common cluster, cluster 4. In 2010 and 2017, it is cluster 3, which contains these five countries along with all three Southern countries (Italy, Greece and Spain) and Cyprus (in 2010, Luxembourg, Switzerland and the UK were also included). Italy and Cyprus are among the best performing countries as well (Italy only in 2017). Italy exhibited high increases in PH and HLY indicators, where its performance significantly increased. Its LE was one of the highest in the sample each year. This is also the case for Spain, but its increase of PH was lower. Although it was higher than that of Italy in 2010, it was lower in 2017. The above-mentioned countries exhibited relatively high performance and often medium, or low (Cyprus) CHE ratios (in Ireland, the highest decrease of the CHE ratio occurred). Greece exhibited approximately medium values of the indicators. Its performance was even higher in PH. However, their trend of development was negative, including one of the lowest increases in LE, a drop in the remaining three health status indicators and a decrease of the CHE ratio. Cluster 1 countries were top for CHE ratios in all four analyses. However, this was often not the case for the indicators reflecting health status. In 2014, the performance of this cluster was even the second lowest, as Slovenia and Portugal were included. These countries had relatively low CHE ratios in comparison to the rest of this group, but relatively high in relation to their

performance. In 2010, these two countries created a common cluster, cluster 4, with Slovakia, to which this applies as well. All three countries had a poor performance, along with relatively high CHE ratios to this performance (the lowest HLYf in the sample, along with Lithuania).

Figure 2: The Values of the Indicators Used in 2017



Source: author's calculations (2020)

Lithuania, exhibiting very low values of all indicators, is the worst performing country of the sample. Although Slovakia exhibited even lower HLY values in 2010, significant increases occurred in all health status indicators, along with a decrease in the CHE ratio. This also decreased in Lithuania, along with health status indicators, with the exception of LE, where the highest increase took place. All these relationships and the development in both health status and healthcare resource indicators must be considered.

4. Conclusion

The aim of this work was to discover relationships between the selected indicators reflecting health outcomes (health status) and healthcare resources in the sample of 31 countries, and to evaluate the performance of these countries. Having applied HCA to the data for indicators in the sample for 2010, 2014, and 2017, and to all data for these three years, four clusters were created in each analysis. The performance in four health status indicators was evaluated and the relationship with resources used, expressed by the CHE ratio, was also assessed.

The poor performing countries can be especially found in cluster 2 and 4 (2010 and 2017) and cluster 1 and 3 (2014), and conversely. The analysis of the whole period helped assess the overall performance in three monitored years and find the best performing countries, which are Norway, Malta and Sweden, included in cluster 4. Moreover, several cluster 2 countries, which were grouped with these countries in the analysis of individual years, can be evaluated as the best performing as well. These include Iceland, Ireland, Italy and Cyprus. The average CHE ratios of both clusters are not the highest. Accordingly, cluster 1, including the remaining developed EU countries and Switzerland, and exhibiting the highest average CHE ratios, is evaluated as the cluster with the second lowest performance. Health status achieved relative to resource used is low, especially in HLY indicators. The worst performance was exhibited by cluster 3, including all new member countries, except for Malta and Cyprus, along with Portugal. These countries were grouped together in the analysis of the individual years, with some exceptions. Slovakia, Slovenia and Portugal were assigned to a separate cluster, cluster 4 in 2010 as countries with a poor performance, especially in HLY indicators, and higher CHE ratios (relatively high in relation to that performance). In 2014, Portugal and Slovenia were grouped with some cluster 1 countries, which exhibited low HLY values. In 2017, the poor performing Baltic countries (exhibiting similar features) were grouped in a separate cluster, cluster 4, while Lithuania can be regarded as the worst performing country in all. Two of three non-EU countries included in the analysis are among the best performing countries. The third one, Switzerland, having among the highest CHE ratios, LE and PH, had a poor performance

in HLY indicators. It is also difficult to assess sustainability. Especially the development of Ireland, Slovakia, Lithuania and Greece, all experiencing decreases in CHE ratios, confirmed that relationships can be comprehensive (mainly positive development in health status indicators in the first two countries and negative in the second two countries). It can be concluded that the relationships between health status indicators and CHE ratios were not straightforward. The challenge is to advance methodologies for the analysis of these relationships since these issues are the crucial aspects of SD.

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Digital Transformation of Industrial Enterprises as a Factor in the Spatial and Economic Development of the Region

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Abstract

The article is devoted to the study of tools and state programs developed for digitalization of industrial enterprises, as an important factor in spatial and economic development. An analysis of the economic and digital space heterogeneity in Russia is made based on the tools of spatial econometrics. A significant and positive spatial autocorrelation was revealed among neighboring regions as a result of the global Moran indices calculations using the matrix of reciprocal distance weights and the boundary matrix. On the example of industrial enterprises of the Perm region, it is shown that the introduction of digital technologies will increase the efficiency of the labor resources usage and establish serial production of innovative high-tech goods. It is proved that the transformation of the production process will have a positive impact on the spatial and economic development of the region. The methodology proposed by the authors for assessing the features of the spatial organization of the economy is universal and can be applied in various regions (including the regions of the European Union) implementing the policy of industrial digitalization.

Keywords: digital transformation, industrial enterprise, regions of the European Union, spatial autocorrelation, spatial heterogeneity

JEL Classification: C10, R10, R12

1. Introduction

The digital transformation of the economy, launched during the fourth industrial revolution, will form a new infrastructure that will be dominated by "smart" objects with artificial intelligence systems. Building such an infrastructure that ensures the formation of competitive advantages in new spatial conditions is of strategic importance in both national and regional development agendas. Only those regions that can use the externalities of the digital revolution to strengthen their competitive positions will become leaders. On the contrary, ignoring modern digital realities and trends can cause negative socio-economic consequences in the foreseeable future, both due to the loss of highly qualified personnel and the loss of the competitiveness of organizations.

One of the modern directions of the competitive model for spatial development is digitalization. The introduction of innovations and the transition from conventional computing systems to technical systems using artificial intelligence led to the formation of the "smart city" (Albino, 2015; Hall, 2000), the "smart region" (Mikki, 2014; Morandi, 2016) and even the "smart nation" (Foo and Pan, 2016). Thus, regions become "smart" and "digital" as modern

intellectual solutions are introduced into various sectors of the economy and public life, i.e. as they are digitalized. The new fourth revolution (Industry 4.0) is associated primarily with artificial intelligence, as well as with cyber-physical systems, augmented reality, the Internet of things, big data, cloud computing, smart materials, and 3D printers (Schwab, 2016). “Smart plants” appear as a result of the introduction of such technologies (Zuehlke, 2010), where the artificial intelligence system will manage not only production robots, but also all processes – from the supply of raw materials to the delivery of products to the final consumer. The introduction of digital services and technologies in organizations, as well as a modern approach to the development of «smart» industries, have a significant impact on maintaining a high technical and technological level of the organization, and, as a result, maintaining its competitiveness.

Digital transformation of social production will allow not only coordination and cooperation of geographically distributed participants in economic relations, but also remote control of robotic systems and complexes. In addition, the economic business effects of digitalization are due to an increase in the level of service support, which allows switching to a payment model based on the actual volume of product consumption in relations with consumers. Thus, the widespread digitalization of the economy can have a significant impact not only on improving the competitiveness of products by reducing the unit cost of production. Digital transformation can transform the historical spatial organization and territorial structure of socio-economic systems (Naumov, 2019; Dubrovskaya, 2018). In this regard, the issue of determining the impact of digitalization on the spatial and economic development of the region, as well as identifying trends in the development of economic and digital space, is being updated.

According to digitalization ratings (Abdrakhmanova, 2018; Abdrakhmanova, 2019; Bank, 2016) of the countries analyzed by us the Russian Federation is not included in the group of leaders for the digital economy in many respects: the share of digital economy in GDP (3.9 per cent - which is 2-3 times lower than that of the leaders), the number of publications devoted to ICT topics in journals indexed in international databases, the share of ICT specialists in total number of employed people, level of digitization etc. However, when considering the level of digitalization of the regions in the Russian Federation over the past 10 years, there is a positive dynamics of indicators: the use of the Internet in organizations in the country has reached 82 % (in some regions, 94.9%) on average, 76% of households have access to the Internet, while 60% use the Internet almost every day. In addition, speaking of inter-regional comparisons, it is important to note that the final indicators of digitalization in the Russian regions are fairly uniform in all ratings.

Thus, digital transformation becomes an objective necessity to achieve a high technical and technological level of the enterprise, and, as a result, to maintain its competitiveness. The purpose of this study is to provide a theoretical and practical justification of the importance of digital transformation of industrial enterprises for spatial and economic development of territories.

2. Problem Formulation and Methodology

The paper uses empirical methods (matrix methods of calculation; cartographic method; comparative method), as well as theoretical ones (analysis of legal documents; statistical data and statistical collections; bibliographic analysis of literature and Internet materials).

The methodological content of the work is based on the hierarchical approach and the ideology of institutional and evolutionary economic theory. The works of scientists in the field of

research of competitive advantages of territories, distribution of productive forces, digital economy, as well as works devoted to the analysis of problems and prospects of digital transformation of the economy were used as the theoretical basis of the research.

The database of the Federal state statistics service "Regions of Russia. Socio-economic indicators" for 2017, regional ratings of specialized organizations, data from the SPARK were used as the information resource.

In our study, we used the following indicators to assess the digital transformation of the industry: the share of organizations (in the total number of organizations) using broadband Internet, as well as the share of organizations (in the total number of organizations) using ERP systems. The first indicator characterizes the digitalization of business in the country as a whole, the second is a narrower indicator that is critical for managing thousands of businesses of all sizes and in all industries. Enterprise resource planning (ERP) is business process management software that allows an organization to use a system of integrated applications to manage the business and automate many back office functions related to technology, services and human resources. ERP systems are technologies that provide "smart manufacturing". Therefore, the level of ERP systems usage is an indicator of the industrial production digital transformation.

The study has traditionally used the GRP per capita indicator for the analysis of economic development. At the same time we adjusted the GRP per capita according to the purchasing power parity method (Savaley 2017). The necessity to adjust is due to the fact that GRP is published in nominal prices and does not take into account price differences in consumer goods and services in Russian regional statistics. As a result of this adjustment, the gap in the size of GRP per capita in consumer price parity between the region that received the maximum value (Nenets Autonomous district - 3051,3 thousand RUB/person) and the region received the minimum value (the Republic of Ingushetia - 128,4 thousand RUB/person) has decreased in 2,3 times: from 54.7 to 23.7 times.

On the basis of three selected indicators (the share of organizations (in the total number of organizations) using broadband Internet; the share of organizations (in the total number of organizations) using ERP systems; adjusted GRP per capita), the digital and economic heterogeneity of the development of the Russian space was estimated. The assessment was based on the calculation of the global Moran index (formula (1)).

$$I = \frac{\sum_i \sum_j w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\frac{1}{n} \sum_i (x_i - \bar{x})^2 \sum_i \sum_j w_{ij}} \quad (1)$$

where w_{ij} – element of the weight matrix W ; x_i – studied indicator of the region i ; n – total number of objects (number of regions). According to the null hypothesis that there is no global spatial autocorrelation the expected value of the Moran index is calculated using the formula (2):

$$E(I) = -\frac{1}{N-1} \quad (2)$$

If $I > E(I)$, i.e. $I \in (0; 1]$, that means that there is a positive spatial autocorrelation (nearby neighbors often tend to show similar values of the indicator under consideration); if $I < E(I)$, i.e. $I \in [-1; 0)$, that means that there is a negative spatial autocorrelation (nearby neighbors tend to show different values of the considered indicator).

The study used 2 types of weight matrices: the inverse distance matrix and the boundary weight matrix. When using the inverse distance matrix, the influence of all regions on each other is

taken into account. when using the boundary weight matrix, the influence of only neighboring regions is taken into account.

In this case, the elements of the inverse distance matrix are equal:

$$w_{ij} = \begin{cases} 0, & \text{if } i = j \\ \frac{1}{d_{ij}}, & \text{if } i \neq j \end{cases} \quad (3)$$

d_{ij} – distance between centers of the regions;

Elements of the boundary matrix of weights:

$$w_{ij} = \begin{cases} 0, & \text{if regions } i \text{ and } j \text{ do not have a common border} \\ 1, & \text{if regions } i \text{ and } j \text{ have common border} \end{cases} \quad (4)$$

The inverse distance matrix is formed as a result of automated parsing of thematic sites. To calculate distances for each region, a list of bordering regions and its central city is calculated using online encyclopedias. Next, the distance between the centers of all regions is calculated. If there is no road or rail service, the distance spent on air travel is used, multiplied by the weighted average coefficient of distances calculated for other regions where such a service is available. Data about borders, administrative centers, and distances are stored in the computer's memory by a self-learning algorithm. The saved data has a timestamp that will force the algorithm to access the online data again after a certain period of time (this is due to the variability of regional borders and the road map of Russia).

The boundary matrix of weights is formed manually, in accordance with the geographical map of the regions of the Russian Federation. It is based on the principle that there is absence or presence of common border between regions. The constructed matrix is a square which columns and rows correspond to the regions of the Russian Federation. Inside, this matrix is filled with ones and zeros, with a value of 1 in the cell indicating that there is a common border between regions i and j , and a value of 0 indicating that there is no border. The value 0 is also set when comparing the same region, which eliminates the effect of the region's influence on itself. Thus, the regions are compared in pairs, which determines the symmetry of the matrix.

3. Problem Solution

As a result of global Moran indices calculations using the inverse distance matrix and the boundary weight matrix, significant and positive spatial autocorrelation was revealed among neighboring regions, i.e. clustering of regions takes place (Table. 1).

Table 1: Results of Calculating the Moran Index, 2017

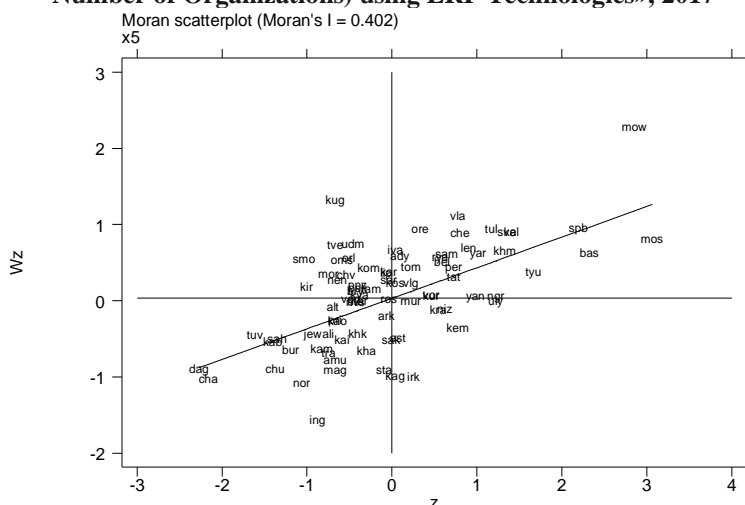
Type of matrix	Proportion of organizations using broadband Internet	Proportion of organizations using ERP systems	GRP adjusted
Inverse distance matrix	0,089***	0,245***	0,050**
Boundary weight matrix	0,189**	0,402***	0,364***

Note: *, **, *** — significance at 5, 1, and 0.1% levels, respectively.

Source: author's calculations

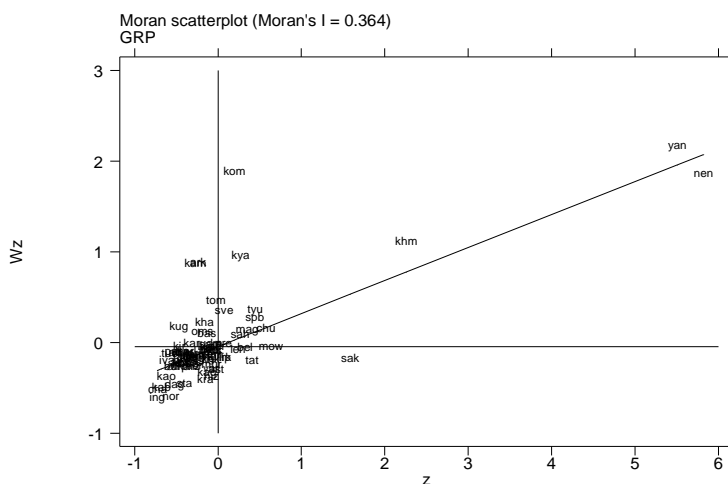
Next, we constructed spatial scattering diagrams (according to the inverse distance weights matrix) (figures 1-2).

Figure 1: Spatial Scatter Chart for the Indicator «Share of Organizations (in the Total Number of Organizations) using ERP Technologies», 2017



Source: author's calculations

Figure 2: Spatial Scatter Chart for the GRP Indicator, 2017



Source: author's calculations

The obtained results of the spatial analysis prove that regions demonstrating a significant level of digital technology implementation in organizations also have a high GRP. Thus, the presence of homogeneous trends in the development of the economic and digital space is revealed.

The Perm region was chosen for a more detailed analysis of the digital transformation in the regional industry. This region has a significant level of digital infrastructure: a developed fiber-optic communication network, a regional geographic information system, two technology

parks in the field of high technologies, an interactive portal "Manage together" for conducting an effective dialogue between the citizens and the government, the provision of Internet access for residents of the region more than 64%, to 4G/3G services more than 77%/88%, respectively. According to the information given by the government of the Perm region (Government of the Perm region [online], 2017), the region is among the ten subjects with a developed digital economy, mobilizing more than 1,700 enterprises of the Telecom industry, software production, and hardware complexes on its territory. Despite this, the development of the economy in the Perm region at this stage is experiencing certain difficulties. In particular, according to official statistics, the production index for the "Mining" type of economic activity in the Perm region has been constantly growing over the past 3 years, while the "Manufacturing" type of economic activity has been falling from year to year.

Since 2017, the region has been actively working on the digital transformation of the industrial sector. For example, in order to improve the personnel reserve, in 2019, the Perm network IT University was opened, which provides training in end-to-end digital technologies. Perm network IT University is a short modular program and demo school for the most popular end-to-end digital technologies. In order to improve the regulatory framework in 2018, the Perm region adopted The concept of developing the digital economy of the Perm region in 2018-2024. The main objective of the Concept is to create conditions for the accelerated development of the economy and society in the region through the development and large-scale distribution of information and telecommunications technologies and services.

The key priority of this Concept is the subproject "Digital automation of production processes, including IIoT". In order to implement it, the Ministry of industry of the Perm region organizes and conducts comprehensive rapid surveys of the level of digital maturity of industrial enterprises in the Perm region with the further formation of a list of digitalization initiatives. This project is a unique regional practice developed for the purpose of digital (intensive) development of enterprises in the territory and is being implemented since 2018. The main participants in Express surveys are three parties: the state, industrial enterprises, and IT companies. A survey request was sent to large industrial enterprises of the Perm region, which revealed the following results (Table 2).

The high demand of industrial enterprises for automation of main and auxiliary production processes was revealed as a result of the survey. Based on the results obtained, detailed rapid surveys were conducted and 70 initiatives for digitalization of production were formed (41 initiatives are currently under development). Two financial instruments were offered for businesses:

1. Preferential loan from the Industrial Development Fund of the Russian Federation. The Fund was founded in 2014 to modernize Russian industry, organize new production facilities and ensure import substitution. The Fund offers preferential conditions for co-financing projects aimed at the development of new high-tech products, import substitution, export, leasing of production equipment, implementation of machine-tool projects, digitalization of existing production facilities, production of high-tech civilian and/or dual-use products by enterprises of the military-industrial complex, production of components, labeling of medicines and increasing labor productivity. For the implementation of new industrial projects, the Fund provides targeted loans at the rate of 1%, 3% and 5% per annum for up to 5 years in the amount of 5 to 750 million rubles, stimulating the inflow of direct investment in the real sector of the economy (RF industry development Fund [online], 2019).
2. Grant from The Russian Fund for Information Technology Development, which was established to provide support for the development and promotion of Russian software, support for scientific, technical, and innovation activities, and development of innovative

infrastructure in the field of information and communication technologies by the Government of the Russian Federation. The RFITD competition provides an opportunity to receive a grant for the implementation of a project to introduce domestic products, services and platform solutions based on "end-to-end" digital technologies in the regions of the Russian Federation within the framework of the Federal project "Digital Technologies". The grant amount is up to 1 billion rubles.

Table 2: Results of the Survey of Industrial Enterprises of the Perm Region

Key questions survey	Industries				
	chemical and petrochemical industry pharmaceuticals	machine building	pulp and paper	instrument making	military-industrial complex
1. The level of the main production processes automation at the enterprise (%)	76	35	45	55	20
2. Level of automation of auxiliary production processes at the enterprise (%)	58	36	75	32	18
3. Your company's need in the automation of the main and auxiliary production processes (% of the total number of respondents)	71	100	50	100	100
4. List of production processes in need in automation	R&D automation systems, working with documentation in production, monitoring the location of personnel in remote areas, automation of mechanical and assembly production				
5. Automation task	to reduce lead time, reduce the impact of human factors and increase production flexibility				
6. Suggested ways to solve the automation problem	implementation of integrated enterprise management systems, ERP- and MES systems, R&D automation systems				

Source: author's calculations

In total, 19 industrial enterprises of the Perm region showed interest in the program. Currently, 5 projects from 4 enterprises of the Perm region have been submitted for the RFITD grant: PJSC Uralkali (2 projects), PJSC PNPPK, JSC UEC-PM, and LLC ARUS. In total, the program is designed for 3 years (2019-2021). The immediate effect of the Express surveys implementation, including its influence on spatial-economic development of the region can be traced on the example of JSC "United Engine Corporation - Perm Motors" won the tender on RFITD grant. The successful implementation of the Project will allow to modernize 210 production workplaces and 231 workplaces for engineering workers, create a trusted technological network for data exchange of production equipment, which will create conditions for the introduction of new modern technologies for the organization of production. This, in turn, will reduce the technological gap from the main competitors and more effectively

establish mass production of an innovative high-tech product-the PD-14 propulsion system (a Perspective Engine with a thrust of 14 tons) for the Russian MS-21 airliner (a Mainline aircraft of the XXI century).

Digital transformation of enterprises is currently considered as a new objective reality of social and economic development in any country. A unique feature of modern digital reality is that the digital environment itself is a driver of enterprise development and directly encourages them to transform. Enterprises are "automatically" integrated into value chains of various levels, into business models of partners through the development of open innovations, network technologies and new organizational forms that practically "erase" physical boundaries, replacing them with virtual ones. To determine the direction of transformation, enterprises must understand the level of technical and technological readiness and readiness to change their business processes and approaches to business process management.

4. Conclusion

As a result of the study, it was revealed that regions that actively implement digital technologies have the opportunity to first, increase the competitiveness of regional enterprises; second, increase the share of information and communication technologies in the gross regional product; and third, reduce the digital gap in relation to the leading territories, ensuring sustainable economic development. The project of digital transformation of industrial enterprises of the Perm region presented in the study has a significant impact on the development of the region. The implementation of such projects aimed at the digital transformation of enterprises, organizations, cities, and regions in the future will allow us to continue the planned trend of reducing the heterogeneity of the development of both the digital and economic space of the regions. The potential of the digital infrastructure created in the region is a major competitive advantage in the fight for investors and human capital. This conclusion opens wide horizons for further research in the field of transformation of the economic and digital space of the economic system of any country.

As a result of the study, it was revealed that regions that actively implement digital technologies have the opportunity, firstly, to increase the competitiveness of regional enterprises; secondly, to increase the share of information and communication technologies in the gross regional product; and thirdly, to reduce the digital gap in relation to the leading territories, ensuring sustainable economic development.

The project of industrial enterprises digital transformation in the Perm region presented in the study has a significant impact on the development of the region. The implementation of such projects aimed at the digital transformation of enterprises, organizations, cities, and regions in the future will allow us to continue the planned trend of reducing the development heterogeneity of both the digital and economic space of the regions. The potential of the digital infrastructure created in the region is a major competitive advantage in the fighting for investors and human capital. This conclusion opens wide horizons for further research in the field of the economic and digital space of the economic system transformation in any country.

In the future, it is planned to use the authors' methodology for assessing the features of the spatial organization of the economy for regions in various countries (primarily in EU countries) implementing the policy of industrial digitalization.

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Instrument to Support Brownfield Solutions in the Czech Republic: EU and Public Administration

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Abstract

This paper deals with the issue of brownfields which is a timeless phenomenon associated with a number of undesirable effects that are determined by the involvement of the public sector and organizations in their elimination. At the highest level, these are central state administration bodies, at the level of mesoregions they are higher territorial self-governing units. In the context of the Czech Republic as a member of the European Union, this entity can also be considered as fully relevant. These institutions declare their relationship to brownfields in their documents and other activities. The aim of the paper is to analyze and synthesize the state of formal and practical involvement of these three entities in the Czech Republic in order to solve problems following from the existence of brownfields in their own territory. The fulfilment of the content of the paper is based on the research of secondary sources and their analysis in relation to the defined topic of the research.

Keywords: brownfield, EU, public administration, local government, state administration

JEL Classification: O18, R11, R51, R58

1. Introduction

Brownfields, represented by abandoned and disused sites, properties or buildings, are part of the urban heritage of our society, whose existence, in general, is undesirable and unwanted (Turečková et al., 2018). This is the reason why the issue is dealt with by public institutions that can contribute both with their financial and non-financial tools to a higher level of brownfield regeneration, which would not be possible if merely the private sector was involved (Martinát et al., 2017). Important institutions and subjects of public sector involve individual central bodies of state administration and local self-government authorities for higher-level and lower-level administrative units. As the Czech Republic is a member of the EU, the European Union is also an important subject involved in the regeneration and revitalization of brownfields with the aim to efficiently use the sources and profits (Pakšiová, 2017) by broadening of the requirements for subjects to provide information about its use in the closing of books and annual reports (Petera et al, 2019). There are programmes and operational programmes to support the brownfield regeneration that are financed from the structural funds of the EU. These programmes are aiming to support the integration and sustainability (MacGregor Pelikánová, 2019a), as well as the proper functioning of the competition on the single domestic market (MacGregor Pelikánová, 2019b). The task of the different levels of administration is to create suitable tools and conditions which will allow us to solve the brownfield related issues (Turečková, Varadzin a Nevima, 2018).

The issue of brownfields falls within the competence of the government of the Czech Republic, specifically within the Ministry of the Environment and the Ministry of Regional Development. Yet this issue also concerns the Ministry of Industry and Trade, the Ministry of Agriculture and the Ministry of Culture, and the Ministry of Finance as far as finances are concerned. There is no doubt that it falls within the competence of other ministries and governmental bodies and institutions as well (CzechInvest, Centre for Regional Development, etc.)

The aim of the paper is to analyse clearly the condition of the formal and practical involvement of the European Union, central bodies of administration and higher self-governing authorities of the Czech Republic in the solution of the issues resulting from the existence of brownfields on an individual locality.

2. Applied Methods and Procedures

The presented paper is a survey article that analyses on a fundamental level the relation between the European Union and central bodies of state administration and higher-level territorial self-governing units regarding the key documents and specific activities and programmes. The principal applied method here is the method of the research of public secondary sources, mainly from the European Union, the Ministries of the Czech Republic, the regions of the Czech Republic and the regional development agencies within the administration of the regions. Due to the demanding character of the topic, this is a basic overview of the formal and practical relation between the European Union and public administration regarding the abandoned sites and properties on the state and regional level with the aim to determine the most substantial relations and detect by a simple comparison such subjects that approach the issue of brownfield with more initiative than the others.

This article is an extension of the article *The Issues of brownfields and their tools to support the solution in public sector: a case study on the Czech Republic* by Duda and Turečková on the aspects of the European Union and structural funds of the EU, from which the financial resources are used for the programmes and operational programmes that are focused on the issues of regeneration and revitalization of brownfields.

3. Business and Investment Development Agency CzechInvest

Business and Investment Development Agency CzechInvest is a state contributory organization subordinate to the Ministry of Industry and Trade of the Czech Republic. The agency arranges for the Czech Republic domestic and foreign investments in the areas of manufacturing, strategic services and technology centres. It supports small, medium-sized and innovative start-up companies, the business infrastructure and innovation (CzechInvest, 2019).

CzechInvest (1) maps and identifies sites suitable for implementation of projects in individual regions of the Czech Republic – National Brownfield Database, (2) in cooperation with other public institutions, CzechInvest prepared materials for National Brownfield Regeneration Strategy in the Czech Republic and is involved in its fulfilling, (3) provides information and administer the programmes aimed at supporting regeneration of brownfields financed from the state budget (Programme for Regeneration and Commercial Use of Brownfields and Business Property and Infrastructure Support Programme) as well as from the structural fund of the EU (Properties Programme), (4) prepares and organizes tours of the

selected properties, (5) holds seminars and conferences on brownfield regeneration, (6) administers the website www.brownfielddy.eu (CzechInvest, 2019).

4. The European Union and Brownfields

As it was mentioned above, the Business and Investment Development Agency CzechInvest provides besides other things information and administers the programmes to support the brownfield regeneration also financed from the structural funds of the EU. They are predominantly these three funds: European Regional Development Fund, the Cohesion Fund and European Agricultural Fund for Rural Development.

4.1 European Regional Development Fund

The fund originated in 1975. The fundamental objective of the fund is to strengthen the economic and social cohesion in the EU and to balance the differences between the regions. In the period between 2014 and 2020, the investment is directed towards several key activities as follows: innovation and research, digital agenda, support for small and medium-sized enterprises, low-carbon economy. The revitalization of brownfields in the Czech Republic is supported by this fund through the financing of the Operational Programme Enterprise and Innovation for Competitiveness (European Commission, 2020).

Operational Programme Enterprise and Innovation for Competitiveness 2014—2020 – this programme is the fundamental programme document of the Ministry of Industry and Trade for the disbursement of financial resources from the European fund for the regional development in the programming period of the EU cohesion policy 2014-2020. The operational programme was approved by the European Commission on April 29th, 2015 and became the key tool to support Czech entrepreneurs by funds of the European Union in the programming period 2014-2020 (Ministry of Industry and Trade, 2015). Part of this programme is also the support of brownfield regeneration within the problematic sphere of “The Environment”. It also includes the enhancement of entrepreneurial environment for small and medium-sized enterprises by providing the appropriate infrastructure, modernization and improvement of the existing industrial sites and brownfield renovation to be utilized economically; revitalization of brownfields for manufacturing activities, regeneration of brownfields for the purpose of further business activity (Operational Programme Enterprise and Innovation for Competitiveness 2014-2020, 2019).

Real Estates Programme –the programme is launched according to the operational programme approved by the Commission based on the article No.96 of the regulation of European Parliament and the Council No. 1303/2013. Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.

The modernization of the manufacturing enterprises, the reconstruction of the existing obsolete infrastructure and the reconstruction of the sites such as brownfields with their transformation to modern entrepreneurial sites is supported (excluding the expenses for the removal of ecological burden). The managing body is the **Ministry of Industry and Trade**. It is part of

the Operational Programme Enterprise and Innovation for Competitiveness (Real Estates Programme, 2014).

4.2 The Cohesion Fund

In the period 2014-2020, this Fund is intended for Bulgaria, the Czech Republic, Estonia, Croatia, Cyprus, Lithuania, Latvia, Hungary, Malta, Poland, Portugal, Romania, Greece, Slovakia and Slovenia. There is 63,4 billion EUR allocated for this period. The fund supports two spheres, namely the trans-European transport network and the environment. Through the support of the environment the brownfields with ecological burden are supported (in the Czech Republic, it is through the Operational Programme Environment) (European Commission, 2020).

Operational Programme Environment 2014-2020 is a follow-up to the Operational Programme Environment 2007-2013. It offers financial resources from the European Regional Development Fund and from the Cohesion Fund for projects in the sphere of the environment. The managing body is the **Ministry of Environment**. It supports among others the preservation and protection of the environment, and promotes the efficient use of resources by means of adopting measures to improve the urban environment, revitalization of the cities, regeneration and decontamination of formerly built-up areas (brownfields) (including former military areas) (Operational Programme Environment 2014-2020, 2019).

4.3 European Agricultural Fund for Rural Development

The fund is part of the common agriculture policy of the EU. It is a financial tool that supports rural development. Its aim is to enhance the competitiveness of agriculture and forestry, improve environment and landscape or the quality of life in rural areas and the diversification of rural economies. In the Czech Republic, it covers the projects that are part of the so-called Rural Development Programme supporting the revitalization of rural brownfields (DotaceEU.cz, 2019).

Rural Development Programme – this programme is administered by the **Ministry of Agriculture** in cooperation with the State Agricultural Intervention Fund. The European Commission approved the final version of the fundamental programme document of Rural Development Programme for the 2014-2020 programming period on the 26th of May, 2015. The Rural Development Programme, within the sphere of agritourism, supports the investment in the diversification of the activities for agricultural subjects in the sphere of agritourism ensuring the diversification of income, creating new employment for unskilled workers, supporting broader use of agriculture farms and use of rural brownfields (Rural Development Programme, 2017).

The data are schematically arranged in Table 1.

Table 1: Summarizing Table of Programmes/Operational Programmes and EU Funds from which these Programmes Draw Financial Resources, and Ministries that Administer these Programmes

Programme/operational programme	EU funds from which financial resources of the EU are drawn	The Ministry of the Czech Republic that administers the given programme
Enterprise and Innovation for Competitiveness; it also includes Real Estates Programme	European Regional Development Fund	The Ministry of Industry and Trade
Operational Programme Environment	European Regional Development Fund and Cohesion Fund	The Ministry of Environment
Rural Development Programme	European Agricultural Fund for Rural Development	The Ministry of Agriculture

Source: public resources, own adjustment.

5. Public Administration and Brownfields on the Level of Central Bodies of the State Administration

The common drawing up of the national strategy on brownfield regeneration, the embedding of the brownfield issue in the legislation of the Czech Republic and the specification of fundamental tools for the entire process of regeneration and revitalization of brownfields all fall within the competence of the ministries (Dvořáková Lišková et al., 2016). The central bodies of the state administration dealing with the brownfields in their programmes and strategies are mainly the Ministry of Industry and Trade, the Ministry of Regional Development, the Ministry of Agriculture, the Ministry of Environment and the Ministry of Culture.

The Ministry of Industry and Trade supports brownfields mainly through: (1) National Brownfield Regeneration Strategy, (2) Regeneration and Commercial Use of Brownfields Programme, this being the Third Call and (3) Business Properties and Infrastructure Support Programme.

The Ministry of Regional Development supports brownfields through: (1) The Regional Strategy Development of the Czech Republic 2014-2020, (2) Spatial Development Policy of the Czech Republic, (3) subprogramme of Land Revitalization Support Programme 2019, specifically the subprogramme Regeneration and Non-commercial Use of Brownfields, (4) Principles of Urban Policy of the Czech Republic, (5) Partnership Agreements for the programming period 2014-2020.

The Ministry of Environment addresses the issue of brownfields through: (1) State Environmental Policy of the Czech Republic 2012-2020, (2) Strategic Framework for Sustainable Development.

The Ministry of Agriculture supports the issue of brownfields through (1) Growth Strategy – Czech agriculture and food industry within the Common Agriculture Policy of the EU after 2013. In order to enhance the relations between agriculture and rural areas, investment subsidies for the renovation of agricultural brownfields are preferred, together with developing agricultural farms in urban zones and diversification (agritourism connected with the

environment) (Growth Strategy - Czech agriculture and food industry within Common Agriculture Policy of the EU after 2013, 2012.)

The Ministry of Culture deals with the issue of brownfields through: (1) Integrated Strategy for Support of Culture until 2020, (2) Strategy for Support of potential cultural heritage use in the context of cohesion policy 2014+.

Table 2 summarizes the involvement of the bodies of state administration in the issue of brownfields. More information on programmes and strategies concerning brownfields of individual central bodies of state administration can be found in the article The issue of brownfields and their tools to support the solutions in public sector: a case study on the Czech Republic by Duda and Turečková.

Table 2: Summarizing Table of Involvement of Central Bodies of State Administration in the Issue of Brownfields

The central body of state administration	Programme, strategy
The Ministry of Industry and Trade	<ul style="list-style-type: none"> ▪ National strategy on brownfield regeneration ▪ Regeneration and Commercial Use of Brownfields Programme, the Third Call – 2019 ▪ Programme to support business real estates and infrastructure
The Ministry of Regional Development	<ul style="list-style-type: none"> ▪ The strategy of the regional development of the Czech Republic 2014-2020 ▪ The spatial development policy of the Czech Republic ▪ subprogramme of Land Revitalization Support Programme 2019, specifically the subprogramme Regeneration and Non-commercial Use of Brownfields ▪ Principles of Urban Policy of the Czech Republic ▪ Partnership Agreements for the programming period 2014-2020
The Ministry of Environment	<ul style="list-style-type: none"> ▪ State Environmental Policy of the Czech Republic 2012-2020 ▪ Strategic Framework for Sustainable Development
The Ministry of Agriculture	<ul style="list-style-type: none"> ▪ Growth Strategy – Czech agriculture and food industry within the Common Agriculture Policy of the EU after 2013
The Ministry of Culture	<ul style="list-style-type: none"> ▪ Integrated Strategy for Support of Culture until 2020 ▪ Strategy for Support of potential cultural heritage use in the context of cohesion policy 2014+

Source: public resources, own adjustment.

6. Public Administration and Brownfield on the Level of Regions

The aim of this chapter is to map the involvement of regional institutions in the process of the support of brownfield regeneration on their territory. It is performed particularly through strategic documents concerning the issue of abandoned sites, their mapping, creating of one's own database, establishing of one's own financial and non-financial tools, consultancy services, popularization and promotion of brownfields, creating of incentive programmes, etc, all this in collaboration with other institutions, or through establishing of one's own institution (Duda a Turečková, 2019; Sucháček, 2016). More information concerning the involvement of the regions in the issue of brownfields can be found in the article The issue of brownfields and

their tools to support the solutions in public sector: a case study on the Czech Republic by Duda and Turečková. The obtained data is schematically categorized and processed in summarizing Table 3 (divided into Tables 3a and 3b).

Table 3a: Overview Table for the Involvement of the Regions in Problematics of Brownfields

Region NUTS 3	Strategic documents with relevant presented brownfield issues		Specialized institutions of the region	Brownfields database (number, October/2019)	
				Czech Invest	regional database
Moravian-Silesian Region	<ul style="list-style-type: none"> Akční plán regenerace brownfields v Moravskoslezském kraji (MSID; 2018) Studie lokalit brownfields podpořených Moravskoslezským krajem v letech 2005-2012 (ARR) 		<ul style="list-style-type: none"> Moravskoslezské Investice a Development, a.s. 	56	MSID: 164
Zlin Region	<ul style="list-style-type: none"> Strategie využití brownfields ve Zlínském kraji (2010) 	<ul style="list-style-type: none"> Odbor strategického rozvoje kraje (Oddělení absorpční kapacity) Regionální rozvojová agentura Východní Moravy 		13	Zlin Region: 114
South-Moravian region	<ul style="list-style-type: none"> Brownfielddy Jihomoravského kraje (ARRJM; 2018) Případové studie regenerace brownfielddů (ARRJM; 2019) 	<ul style="list-style-type: none"> Regionální rozvojová agentura jižní Moravy 		57	RRAJM: 395
Olomouc Region	<ul style="list-style-type: none"> Vyhledávací studie lokalit brownfields v Olomouckém kraji (Olomoucký kraj; 2011) 	<ul style="list-style-type: none"> Regionální rozvojová agentura Východní Moravy Krajský úřad: Odbor strategického rozvoje kraje, Oddělení regionálního rozvoje 		43	within another database: 113
Prague	<ul style="list-style-type: none"> <i>not available</i> 	<ul style="list-style-type: none"> Regionální rozvojová agentura Střední Čechy 		1	<i>not available</i>
Central Bohemian Region	<ul style="list-style-type: none"> Brownfielddy ve Středočeském kraji (Středočeský kraj) 	<ul style="list-style-type: none"> Regionální rozvojová agentura Střední Čechy Krajský úřad: Odbor regionálního rozvoje 		32	Within the database Investment opportunities: 23
Hradec Králové Region	<ul style="list-style-type: none"> <i>not available</i> 	<ul style="list-style-type: none"> Centrum evropského projektování 		30	Hradec Králové Region: 62

Table 3b (continuation): Overview Table for the Involvement of the Regions in Problematics of Brownfields

Region NUTS 3	Strategic documents with relevant presented brownfield issues		Specialized institutions of the region	Brownfields database (number, October/2019)	
				Czech Invest	regional database
Pardubice Region	<ul style="list-style-type: none">Regionální akční plán Pardubického kraje (RRAPK; 2016)	<ul style="list-style-type: none">Regionální rozvojová agentura Pardubického krajeKrajský úřad: Odbor rozvoje, Oddělení regionálního rozvoje	24	Brownfields of the Pardubice Region: 178	
Vysočina Region	<ul style="list-style-type: none"><i>not available</i>	<ul style="list-style-type: none">Regionální rozvojová agentura Vysočina	27	<i>not available</i>	
South Bohemian Region	<ul style="list-style-type: none"><i>not available</i>	<ul style="list-style-type: none">Regionální rozvojová agentura jižních Čech	30	<i>not available</i>	
Karlovy Vary Region	<ul style="list-style-type: none"><i>not available</i>	<ul style="list-style-type: none">Agentura projektového a dotačního management	38	<i>not available</i>	
Liberec Region	<ul style="list-style-type: none">Program rozvoje Libereckého kraje 2014–2020 (2014)Strategie udržitelného rozvoje Libereckého kraje 2006-2020Strategie rozvoje Libereckého kraje 2006–2020 (2012)	<ul style="list-style-type: none">Krajský úřad: Odbor regionálního rozvoje a evropských projektůAgentura regionální rozvoje	58	Within the database Investment opportunities: 317	
Plzeň Region	<ul style="list-style-type: none">Strategie rozvoje Plzeňského kraje 2020 (2012)Program rozvoje Plzeňského kraje 2014+ (RRAPK; 2014)	<ul style="list-style-type: none">Regionální rozvojová agentura Plzeňského kraje	26	<i>not available</i>	
Ústí nad Labem Region	<ul style="list-style-type: none">Analýza potřeb revitalizace území Ústeckého kraje: Území devastovaná těžbou, brownfields a zanedbané části měst (RRAUK; 2011)Strategie rozvoje Ústeckého kraje do roku 2027 (2018)	<ul style="list-style-type: none">Regionální rozvojová agentura Ústeckého kraje	73	Within the database Invest-UK: 102	

Source: public resources, own adjustment.

Note1: windows in the table are adjusted to content

Note2: documents and institutions are listed in Czech, as official English translations are not always available

7. Conclusion

The aim of the contribution was to analyze the condition of formal as well as practical involvement of the European Union, central bodies of state administration and higher-level of administrative units in the Czech Republic in the solution of problems resulting from the existence of brownfields on its own territory.

Business and Investment Development Agency CzechInvest provides besides other things information and administers programmes to support the brownfield regeneration financed also from the structural funds of the EU. They are primarily the following three funds: European Regional Development Fund, the Cohesion Fund and European Agricultural Fund for Rural Development. These funds support through the financial resources of the Operational Programme of Enterprise and Innovation for Competitiveness, Operational Programme Environment and Rural Development Programme the brownfield regeneration for the purpose of further business activity, regeneration and decontamination of former built-up areas (brownfields) or broader use of agricultural farms and use of rural brownfields.

The central bodies of the state administration dealing with the brownfields in their programmes and strategies are mainly the Ministry of Industry and Trade, the Ministry of Regional Development, the Ministry of Agriculture, the Ministry of Environment and the Ministry of Culture. These institutions declare their relation toward brownfields in their strategies, documents and other activities. The main idea contained in these documents is the transformation of brownfields in the Czech Republic to economically productive, ecological and socially healthy territories with the help of coordinated effort of all levels of public administration, private sector and non-profitable organizations. Other goals include reduction of the number of brownfields and share of agricultural land for new housing construction in compliance with the principles of sustainable development and improvement of the quality of urban space and increase of the competitiveness of municipalities and cities (Staníčková and Melecký, 2018). One of the priorities for the Czech Republic is to create preconditions for polyfunctional use of abandoned sites and areas, i.e. industrial, agricultural, military or other types of brownfields. It is also desirable that the public sector motivates the private sector to prepare projects concerning brownfield regeneration and to take measures that prevent the development of brownfields. Therefore the Ministry of Industry and Trade announced the Third Call-2019 Regeneration and Commercial Use of Brownfields Programme to which the regions and municipalities from the structurally affected regions (Moravian-Silesian, Ústecký Region, Karlovy Vary Region) and economically problematic regions could apply. As it was mentioned at the beginning, it is apparent from the results of the research that there are considerable differences among the Czech regions regarding the attitude towards the issue of brownfields, this having an implication into the regional development and exploitable potential of the given area. There are no strategic documents with relevantly presented problems of brownfields for Hradec Králové Region, Vysočina Region, South Bohemian Region, Karlovy Vary Region and the capital city of Prague. The capital city of Prague neither has its own brownfield database at its disposal, nor it participated in establishing its own public institution to deal with this phenomenon. The highest number of strategic documents with relevantly presented issues may be noted in Liberec Region, namely three documents: Liberec Regions Development Programme 2014-2020 (2014), Sustainable Development Strategy of Liberec Region 2006-2020 or Development Strategy of Liberec Region 2006–2020 (2012). Liberec Region is also active in the sphere of brownfields on several levels, it co-organizes seminars “Brownfields and greenfields of the Liberec Region” with the aim to support the idea of revitalization of unused properties in the region, which is perceived as a huge developmental potential, or an exhibition called “Brownfields in Liberec Region” (in collaboration with the Regional Development Agency, plc).

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Factors Shaping Competitiveness of Small and Medium Enterprises in Poland

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Abstract

The following article is devoted to an essential contemporary issue of competitiveness in business. The data collected for the purpose of the study examines the concept from an empirical viewpoint with the major aim to identify factors influencing the shaping process of competitiveness in the sector of small and medium entrepreneurs who run their business activity within the Silesian province, one of the strongest economic regions in Poland. The first step taken with the aim of achieving the goal of the study is to present the concept in a theoretical light, and then to list down major assumptions and premises leading to subsequent results. The closing part of the article includes final conclusions.

Keywords: competitiveness, Poland, small and medium enterprises

JEL Classification: D22, D23, L20, L22

1. Introduction

Competition is a phenomenon that has been present in all areas of human activity since a very long time. Nowadays, in the age of a fast-moving environment and changeable economic conditions, to gain and maintain a stable position on the market, a company must possess an optimal action strategy, i.e. it must be competitive. However, to reach this goal it is necessary to define factors that govern a company's competitiveness, which in turn allows to facilitate its development and improvement. In recent years, the problem of competitiveness has been one of the most frequently addressed research issues in economic sciences. Within the EU, Member States differ in the level of socio-economic development and competitiveness of their economies. The European Union is not a homogenous organism in this respect, which makes it difficult to assess its competitiveness in a global context. However, each European country has common characteristics that affect and influence the competitiveness of all the actors located in it, even though the variability in the level of competitiveness of the actors in that country can be very high (Staničková et al., 2018). The following article is aimed to examine factors contributing to business competitiveness of small and medium companies, which play a very important role in the economy of every country and form the basis for all contemporary European economies (Vojtovič, 2016). It is the sector of small and medium enterprises where human skills, entrepreneurial, innovation and employment aptitude concentrate. The first step taken with the aim of achieving the goal of the study is to present the concept in a theoretical light, and then to list down major assumptions and premises leading to subsequent results. The closing part of the article includes final conclusions.

2. The Essence of Competitiveness

The complexity of the notion of competitiveness lies in the diversity and ambiguity of approaches towards the issue, which makes it difficult to formulate one widely accepted definition. It is possible to enumerate several causes of such a status quo. First of all, competitiveness can be investigated at three different levels, i.e. as: micro-, mezzo- and macro-competitiveness (Majerová et al., 2014; Majerová et al., 2016, Cisneros et al., 2017). Secondly, the idea of competitiveness has an origin in several economic theories, e.g. international commerce theory - which mentions such concepts as international competitiveness, international competitive position, competitive ability – or the theory of economic growth and micro-economy (Wziątek-Kubiak, 2003). Thirdly, the category of competitiveness is a theoretical concept, so in order to define it, it is necessary to delimit boundaries between different dimensions of competitiveness (Gorynia, 2009). Last but not least, the existent divisions of competitiveness lay ground for its consequent definitions. For instance, Hübner proposes an idea of price and non-price competitiveness (Hübner, 1994), Bakier draws a line between functional (real) and factor-based competitiveness (Bakier, 2000), whereas Bienkowska differentiates between international factor and result competitiveness (Bienkowska, 1996).

One of the definitions of competitiveness presented during the World Economic Forum in Lausanne in 1994 was *“the ability of a country or enterprise to generate more profit than its competitors on the global market”* (Stankiewicz, 2002). The Organization for Economic Co-operation and Development (OECD) adopted the following definition of competitiveness in 1997: *“Competitiveness refers to the ability of enterprises, branches of economy, regions, countries or transnational groups within a given country to generate a relatively high income and show a profound level of involvement of production factors in the long run under the circumstances of a stable and long-lasting participation in the international rivalry”* (Stankiewicz, 2002).

Perhaps the term competitiveness was used in Polish literature for the first time by S. Flejterski, who described it as *“the ability to design, create and sell goods whose prices, quality and other added values are more attractive than those of comparable products offered by competitors”* (Flejterski, 1984). M. J. Stankiewicz defines competitiveness as a feature characterizing the members of competition (Stankiewicz, 2002). On the other hand, M. Gorynia assumes that *“competitiveness means the ability to compete, i.e. to act and survive in competitive surroundings”* (Gorynia, 2009).

Competitiveness is not an absolute feature which could be ascribed to a given economic subsystem by the use of terms whose meaning does not assume reference to the features of other subsystems, as well as a given type of relations between particular subsystems (Gorynia, 2009, p.50). With an attempt to imagine the existence of a scale used for measuring competitiveness, it is essential to acknowledge the fact that the element of reference to those features of other objects which the examined object competes with will always be present. Therefore, it can be assumed that competitiveness is fundamentally a relative feature, whose concept suggests a type of relation between the examined entity and other objects. Thus, competitiveness can be understood as a comparative relative feature. It is based on ascribing a set of characteristics to an entity by means of performing its comparison with other objects or juxtaposition with a particular standard of comparison.

3. Factors Influencing a Company's Competitiveness

The competitiveness of companies is determined by institutions, policies and other factors, determining their continued presence in the market, profitability and ability to adapt production to demand (Chao et al., 2015,) while reducing vulnerability to competition and being resistant to erosion by substitute products (Porter, 1994, Subramanian et al., 2014, Nara et al., 2019).

H. G. Adamkiewicz-Drwiłło proposes to divide factors influencing competitiveness of enterprises run within the area of market economy into 2 major groups, depending on the character of marketability and the way of making decisions.

It is possible to differentiate between the following two factors determining an enterprise's competitiveness from the point of view of the character of marketability:

1. Market factors – which have a direct influence on the level of a company's competitiveness. They include such aspects as: the volume of a market offer - the quantity of goods (products or services) offered on the market, their price, quality, as well as sales terms.
2. Non-market factors – together with market factors they condition the level of business competitiveness. The most crucial non-market factor having an impact on competitiveness is a widely interpreted technical progress.

The division of factors of competitiveness into market and non-market ones constitutes a general classification – the price, quality and quantity of offered goods are aspects which distinguish an enterprise on the market from the perspective of its goods. On the other hand, technical progress - understood as the most important non-market factor that takes part in the shaping of competitiveness - is a company's driving power that boosts the rate of undergoing changes.

From the point of view of the way decisions are made in an enterprise, it is possible to differentiate between the following factors of competitiveness:

1. External factors – include legal, technical and ecologic regulations.
2. Internal factors – the most important ones include: the character of a company's ownership, organization and management system, marketing and, above all, public relations (shaping relations between an enterprise and the market), personnel's (especially production and management staff's) qualifications, production-oriented decisions, mainly those regarding the volume of production and related costs of production (Adamkiewicz-Drwiłło, 2002, Adamkiewicz-Drwiłło, 2010).

4. Methodological Premises of the Study

In the further part of this study, the basic methodological assumptions of the conducted research will be presented and a short description of the region and the economic entities operating here will be presented.

4.1 Research Methodology

The impact of separate determinants of competitiveness might be different in case of small or medium companies and big enterprises with a considerable capital. The major scientific target is to distinguish factors which influence competitiveness of micro-, small and medium companies (Dudzik-Lewicka at al., 2015). Consequently, it would be hardly possible to examine the entire population, so the research sample was determined by a deliberate choice.

With the aim to perform an accurate measurement of a given phenomenon, it is essential to use a method which makes it possible to obtain most reliable data in a most transparent way. In order to identify factors which shape competitiveness of small and medium companies, we applied one of available quantitative research methods, i.e. a questionnaire. Among the main advantages of this method we can enumerate: a low realization cost, the speed of gathering data, a high level of anonymity, as well as flexibility in terms of time provided individually to a respondent for completing the questionnaire, which helps to obtain more precise and reliable answers. With a view to perform the research, the questionnaire was spread by e-mail or handed in personally to 70 chosen respondents. 52 out of 70 application forms (74,28%) were completed in a correct way and returned to the sender.

4.2 Characteristics of the Region of the Surveyed Enterprises

The aim of the study was to identify factors which influence the shaping of competitiveness of small and medium enterprises running their business activity in the Silesian province, one of the most economically robust regions in Poland (Dudzik-Lewicka at al., 2015). The province is a strongly industrialized one, especially in the field of energy and resources as well as metal engineering, which still constitute a significant branch of industry. Silesia is perceived as an interesting region in terms of investments. Taking GDP (Gross Domestic Product) per one inhabitant into consideration, the Silesian province takes the second top position at the national level, just after the Mazovian province. According to the data provided by the National Statistical Office, there were as many as 207947 business entities formally registered in the region at the end of 2011, where 207526 (i.e. 99,8%) of them were constituted by small and medium enterprises. What is more, micro-companies made up a 95% majority. In 2011 Silesia could boast to have ca. 12% of all business entities registered in Poland, which gave it the second top position among all Polish provinces (Główny Urząd Statystyczny [online], 2015). This fact speaks for a high level of a potential showed by local enterprises.

5. Presentation of Collected Empirical Material

Among the chosen definitions of competitiveness, the majority of examined companies described it as an ability to satisfy customer demands in a more effective and efficient way than it is done by competing companies – such an understanding of competitiveness is shared by half of the respondents (50%). Meanwhile, more than 48% of the respondents, comparing themselves to their competition, strongly believe to have a good competitive position on the market. The remaining 44% estimate their competitive advantage to be good, whereas 4% claim it is very good and put their companies among market leaders. On the other hand, next 4% of the subjects find their competitive position to be rather weak in comparison with their rivals on the market. The vast majority of examined companies believe themselves to be competitive, at the same time emphasizing that they are mainly focused on customers' needs and it this particular aspect which constitutes the major target of their activities aimed at improving their competitive position on the market. To the majority of subject companies, increased sales of products and the ability to offer more attractive services, together with maintaining a stable competitive advantage over competitors, turns out to be less important than competitiveness understood through the aspect of activities aimed at satisfying customers' demands.

Among their major competitors on the market, the respondents pointed to private enterprises, both national and those with a foreign capital, which altogether constitute 88% of businesses. Thus, it can be inferred that small and medium companies rarely compete with public or foreign enterprises. What is more, on the basis of the conducted study, it can be claimed that

the examined small and medium business entities feel rather secure on the market – 54% of them deny being disturbed by the emergence of new competitors on the market. Such a stand may be caused by a company's stable position or the existence of strong barriers impeding the entrance of new entities onto a given market.

The survey allowed us to observe certain discrepancies in the judgment of influence exerted by legal regulations on competitiveness. When asked detailed questions based on a subjective evaluation of impact of such factors as legal regulations in the scope of the labour code, environment protection or health and safety at work, the respondents found these factors as positively influencing business competitiveness (table 1). Nevertheless, when faced with a question about a general judgment of how the legal system influences their competitiveness, all the subjects (100%) gave a negative answer. Thus, such a result may suggest a lack of consistence in giving answers to separate points.

Table 1: The Influence of Selected External Factors on Business Competitiveness as Judged by the Examined Companies

Please evaluate in what way each of the following factors influences your company's competitiveness:	Positively	Negatively	No impact
legal regulations pertaining to running a business activity	52%	No impact	25%
regulations regarding the labour code	25%	40%	35%
norms of health and safety	92%	0%	8%
current tax rate and available reliefs	10%	90%	0%
external financial aids (subventions, bailout, etc.)	96%	0%	4%
norms concerning environmental protection	63%	21%	15%

Source: the authors' own analysis

As far as the internal factors of competitiveness are concerned, all enterprises (100%) pointed to a profound significance of personnel's qualifications in the process of enhancing a company's competitive position on the market (table 2). When asked a question about conducted business trainings which allow employees to improve their skills, 50% of the respondents admitted that they had never conducted any activity in this field. However, it is worth noticing that as many as 75% of medium companies replied positively to this inquiry. On the other hand, almost all small and micro-companies provided a negative answer. Most of the companies prefer to employ already qualified specialists in order to cut down on the costs related to personnel's training.

Table 2: Internal Factors of Competitiveness of the Examined Companies

Please indicate which of the following factors play a decisive role in your company's competitiveness:	%
personnel qualifications	100
organization and management system	75
decisions aimed at cost-saving	62
modern technologies	54
advertisement/public relations	94
location	42

Source: the authors' own analysis

The implementation of any innovations, both process- and production-oriented, is a factor which significantly boosts business competitiveness. 54% of the respondents pointed out that after the application of certain innovations their level of competitiveness was greatly improved. According to the respondents, the most important sources of innovation include: cooperation with suppliers (69% of answers), the acquisition of licenses and trade dresses, as well as the know-how (65% of replies).

When asked to single out one most important market factor of competitiveness, the representatives chose a price and quality of offered goods and services – more than 75% of all answers. The vast majority of the respondents claim that they plan to use these particular factors to build their competitive strategy (more than 52% of answers). The companies seem to go for quality, not quantity, while the price and quality of offered goods are found to be equally important.

6. Conclusion

The results of the conducted study have led us to formulate a set of recommendations which could contribute to an enhancement of competitiveness of small and medium companies:

1. the majority of enterprises should focus on boosting their competitiveness by innovations, both process- and production-oriented. Currently, half of the respondents confirm to have conducted some innovative actions in their business activity. However, the other half has never done so. The cause of such a status quo may come down to the lack of funds for conducting a developmental research, or - in case of smaller companies – for the purchase of new equipment, licenses, etc. Since an innovative enterprise is a competitive enterprise, small and medium companies which do not dispose of funds needed for covering innovative actions should look for resources that can be obtained through any donations or subsidies offered mainly by the European Union's budget,
2. companies from the sector are recommended to focus more on the process of improving qualifications of their employees because professionally educated staff constitutes the most crucial business capital and without it any other actions aimed at a temporary increase of competitiveness may prove inefficient and futile. All the respondents pointed out that the human factor in the form of personnel qualifications is one of the most important determinants of competitiveness. Nevertheless, half of them perform no actions aimed at improving employees' skills, so it is strongly recommended that the managers change their attitude towards this aspect.

Small, medium and micro-companies of the Silesian province can boast an established position among their competitors, and this fact in a way confirms their considerable potential. The enterprises are able to secure and maintain their position on the market for a longer time since they base the creation of their competitiveness on satisfying customer needs, at the same time offering products and services of a high quality at a good price. Provided that those companies which have not taken any innovative activity change their line of action and use the human capital available, the Silesian region will be able to develop its economy much faster.

The fundamental conclusion drawn from the conducted research is the statement that main factors shaping competitiveness are fairly consistent in case of small, medium and micro-companies. No significant discrepancies have been found among individual entities. However, it is to be remembered that the group of selected respondents has been rather small, so the results should be treated only as a provisional starting point to a further research and discussion.

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Asymmetric Shocks and Debt Accumulation: The Case of Eurozone

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Abstract

The paper deals with the issue of asymmetric shocks in terms of incomplete monetary union. Since the 1960s, the area of OCA has been studied extensively and numerous scientific publications have been written on the subject. However, in connection with the outbreak of the financial crisis and the subsequent Great Recession, new contexts have emerged. In the event of asymmetric shocks fiscal policy has a key role to stabilize the Eurozone economy. However, the Eurozone does not have a single fiscal policy yet. The aim of the article is to verify the relationship between the increase in government debt and economic growth in an incomplete monetary union environment facing an asymmetric shock. The research question was examined in the Eurozone member countries in 2008-2018. It was found that there is a negative correlation between economic growth and an increase in government debt. Italy and Greece that were facing economic downturns, recorded a significant increase in the government debt ratio. Moreover, they have been affected by a change in the sentiment of financial markets and a liquidity crisis.

Keywords: asymmetric shock, eurozone, government debt, optimum currency area

JEL Classification: F33, F45, H63

1. Introduction

Fiscal policy has a key role to play in stabilizing the Eurozone economy in the event of asymmetric shocks. A prerequisite for effective use of the stabilization function of fiscal policy is the correct setting of automatic fiscal stabilizers that can dampen shocks without taking discretionary measures. In the case of involvement of discretionary measures should be fiscal policy countercyclical, ie similar to automatic stabilizers the discretionary measures should stimulate aggregate demand during the recession and during the expansion period should, on the contrary, dampen. According to CNB (2019) a good condition of public is therefore a prerequisite for effective use of the stabilization function of fiscal policy finances, correct setting of automatic stabilizers, sufficient flexibility of public budgets and ensuring long-term sustainability of public budgets.

Studies show that the main problem for the Eurozone during the crisis was weak political integration (Razin a Rosefielde, 2012). Fiscal rules that could help to develop in the pre-crisis period. Sufficient fiscal space can only be effective if there is an institution that would enforce the rules (Wyplosz, 2015). On the other hand, other studies argue that the Eurozone can be functional and beneficial for all members even without a fiscal union, but only if rescue mechanisms are in place within the banking union (Mongelli, 2013). Uncertainty regarding the future functioning of the Eurozone institutions, however, constitutes a reason for the new

members states duly considered joining the monetary union and waited at least until the rules of operation clarifies the institutions of the Eurozone, see Podpiera et al. (2015).

The major implication for the Eurozone is therefore not only well-known loss of sovereign monetary policy, but also lower capacity of governments to finance budget deficits. The aim of the article is to verify the relationship between the increase in government debt and economic growth in an incomplete monetary union environment, assuming an asymmetric shock. In connection with this objective, the following hypothesis is set: "In an environment of incomplete monetary union, states face substantial costs to restore economic balance."

2. Theoretical Background and Literature Review

The theoretical basis for the analysis of monetary unions is the theory of optimal currency zones. In the context of the emergence of the single European currency, the findings of this theory are often used to assess the appropriateness of adopting the euro by the existing Eurozone countries and the rationality of the same step for the new Member states of the European Union. Factors contributing to the advantages of the common currency over the free nominal exchange rate then form a set of so-called optimum currency zone characteristics.

The theory of optimum currency area (OCA – Optimum Currency Area Theory) has its roots in the work of R. Mundell (1961), but it has been gradually developed by other economists. McKinnon (1963) has extended the theory of OCA by a factor of economy openness. The essence of his theory is the claim that the costs associated with the loss of the exchange rate as an alignment tool with a higher degree of the economy openness decrease. Another one who has added to the OCA theory, by a production diversification (diversity of production structure), is Kenen (1969). Countries with high level of production diversification are, according to his conclusions, appropriate for a currency area, even at a low mobility of manpower among member states. Kučerová (2005) states that the period, which includes works of the above-mentioned authors (60s of the 20th century) is called a pioneering period. In this period, the authors try to search for basic economic characteristics which a country (resp. region) has to meet to identify where the imaginary boundaries of optimum currency area are – the area where the usage of one currency is optimal. However, this phase is very often characterized by antagonistic criteria for defining the optimum currency area; frequently it was not possible to verify them empirically.

Latter literature on the OCA theory takes into the account also Lucas' critique (Lucas, 1976). This stream falls into the period from 70s of the 20th century. Its basic feature is adopting the idea that no country is able to meet all attributes of the OCA. This stream therefore does not continue in searching for those characteristics, but it focuses on analysis of benefits and costs which arise when creating the monetary union. According to Kučerová (2005) this reconciliation phase is referred to as to a period of emergence of new optimality criteria (symmetry of shocks affecting countries of a monetary union etc.), but many criteria have not been empirically verified yet.

The so-called phase of re-evaluation took place at the turn of the 80s and 90s as a logical result of efforts of monetary integration in European Communities. This phase was influenced not only by the development of macroeconomic theory, but a birth of new methods of macroeconomic modelling as well.

Kučerová (2005) calls the fourth, the last phase, an empirical phase. Empirical studies in this period are focused retrospectively on analysis of the optimality criteria in time, but also on impacts of monetary integration on member economies. In this period two hypotheses were

stated, namely the specialization hypothesis and the hypothesis of the endogenous nature of the OCA criteria, for details see Horváth and Komárek (2002).

Another division of development stages of the OCA theory are stated, for example, by Horváth and Komárek (2002) who divide contemporary approaches to the OCA theory into macroeconomic (correlation of business cycles) and microeconomic (labour market analysis). The macroeconomic approach is called as an early approach and focuses mainly on the analysis of economic shocks absorption. The microeconomic aspects are taken into account rather by the current approach which further highlights the inefficiency of nominal exchange rates when absorbing economic shocks.

The core of the OCA theory, as already mentioned above, is exploring of how countries are adapting to economic shocks within the monetary union. If a country is well prepared for adoption of the common currency, then the probability of its hitting by an asymmetric shock is reduced. The theory of optimum area evaluates this preparedness, for example, by using a correlation analysis of supply and demand shocks, by exploring the convergence of business cycles and convergence of monetary politics, structures and calculation of the OCA index or analysing the role of intra-industry trade.

Babetski et al. (2004) in his article summarizes advantages and disadvantages of early enlargement of the EU with countries of Central and Eastern Europe (CEE). The authors have analysed the economies both from the point of view of meeting the Maastricht criteria and according to the level of achieved real convergence. Via Kalman's filter they have studied the correlation of demand and supply shocks in Ireland, Portugal, Spain and countries of Central and Eastern Europe, namely in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. Results of the study emphasize continuing process of convergence of demand shocks, but the difference of supply shocks in observed economies.

For example, Allegret and Sand-Zantman (2009), who have analysed financial consequences of trade of Latin-American integration in their article, dealt with studying the convergence of business cycles. The authors have worked with a sample of five countries – Argentina, Brazil, Chile, Mexico and Uruguay – including the period 1991–2007. The main question that the authors have stated was concerned with the appropriateness of the monetary union creation among economies of Latin America. For this purpose, the authors have studied whether there is for a set of countries a characteristic synchronization of the business cycle in case of a possible economic shock, then to what extent the countries in the process of adaptation would have the same approach and whether there is a convergence of political reactions. The authors have also focused on the fact to what extent international disturbances influence domestic business cycles through foreign trade and/or financial channels. The authors have also analysed impacts of the adoption of different exchange rate regimes as a reaction of countries towards economic shocks.

Mainly Bayoumi and Eichengreen (1997) have dealt with the OCA index calculation. They have studied the causal relationship between the characteristics of the OCA and the development of exchange rates. Via this relationship they have tried to make simple prognosis. Based on the research the authors have designed the OCA index for European countries. The results point to a symbiotic relation between the economic and monetary integration. Kim and Chow (2003), in their study, have focused on an alternative assessment system for appropriateness of adopting the common currency in countries of Western Europe. It is based on the role of common regional shocks. The results of their research show that the OCA theory explains and predicts decision making in the Eurozone very well. Their claims are based

on the results from the OCA index calculation. The question why one region is more vulnerable to economic shock than other is analyzed e.g. by Staníčková and Melecký (2018).

3. Problem Formulation and Methodology

The default theoretical framework for subsequent analysis is a Theory of Optimal Currency Areas, see Mundell (1961). This fundamental theoretical contribution, however, lacks some aspects, which, for example, have been revealed in the Eurozone by the Great Recession. Already, De Grauwe (2011) pointed out that states that are part of the monetary union issue bonds over which they do not have full control. If a sovereign state issues a government bond, then in a currency over which it has full control. While countries in the monetary union, specifically in the Eurozone, issue bonds in euro. However, the governments of these countries do not have direct control over the euro. As an example, a sovereign country can commit to lenders to repay government bonds at maturity. The central bank of such a country may provide assistance in the event of a lack of liquidity. By contrast, no monetary union country has the power to force the common central bank to provide the necessary liquidity in times of crisis.

The Eurozone debt crisis period has exposed the weaknesses of an incomplete monetary union. The PIIGS States (Portugal, Ireland, Italy, Greece and Spain) found themselves in a situation where they were unable to service their government debts. Investors in financial markets responded to this. Until then, if investors had not distinguished from which Eurozone countries were buying bonds, they had begun to do so with the onset of the crisis. Until the crisis broke, government bond yield spreads were very small, so investors did not distinguish whose bonds they were buying. Since the outbreak of the crisis, investors have become worried that the affected countries will not be able to meet their obligations and have therefore begun to shed their bonds. Here we come across the first problem related to the *solvency of the governments* of the affected countries. The second problem is that investors demanded higher returns, in the form of higher interest, on government bonds. Government bond yield spreads have therefore increased considerably since 2009 and cause *liquidity crisis* in these countries. The Eurozone countries were hit by an asymmetric demand shock. The analysis below will show that it has been and is costly for some Eurozone countries to remain in an incomplete monetary union.

The countries surveyed are the economies of the Eurozone Member states. The reference period is 2008-2018. Thus, the period, which includes the Great Recession and ongoing debt crisis in some eurozone countries. Data are obtained from the Eurostat statistical database (Eurostat, 2020). Specifically, the time series are General government gross debt - annual data [TEINA225] and Real GDP growth rate - volume [TEC00115].

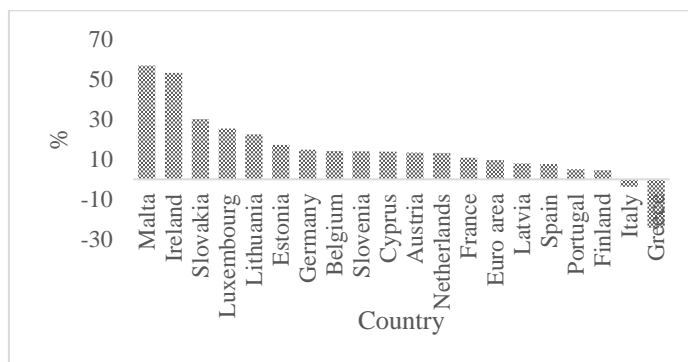
To estimate the dependence between government debt and the economic performance of Eurozone countries, the cumulative economic growth for each country is first calculated. Furthermore, the government debt increase is calculated as the difference between the government debt-to-GDP ratio in 2018 and 2008. Using these two variables: cumulative economic growth and the increase in the government debt-to-GDP ratio, a regression analysis is performed.

4. Problem Solution

In 2007-2008, the world was hit by the financial crisis, which in 2008-2009 manifested itself as the Great Recession. Economic crisis hit all the European Union Member States hard, the impact of crisis varied considerably. The low growth performance in the EU has increased concerns regarding an increasing wage dispersion, income inequality at large, and social

exclusion in line with poverty, see Staníčková (2018). Countries have been gradually recovering from this recession since 2010, nevertheless at a different pace. In addition, some Eurozone countries have experienced further problems in the form of a debt crisis. These include Portugal, Ireland, Italy, Greece and Spain. So, there were states whose economies began to recover gradually and, on the other hand, those whose economies were still in recession. Figure 1 shows the cumulative GDP growth of Eurozone countries in 2008-2018. There is a large difference between countries visible. While the economies of Malta or Ireland grew at an average of 5% per year, Italy and Greece still did not reach their 2008 level. Low cumulative growth of GDP was typical for southern Eurozone countries mainly.

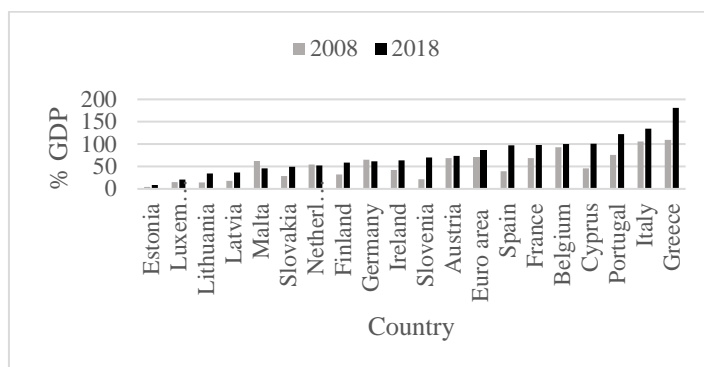
Figure 1: Cumulative Growth of GDP in Eurozone Countries (2008-2018)



Source: Eurostat (2020); own elaboration (2020)

The asymmetric impacts of the economic crisis have significant impacts on government debt also. Countries that were more affected by the crisis are facing higher debt ratios, such as Portugal, Italy, Greece, see Figure 2. The asymmetric impacts of the economic crisis also have great impacts on government debt. Countries more affected by the crisis are facing higher debt ratios. We observe this phenomenon especially in the southern Eurozone countries. While countries that have recovered from the crisis more quickly, have lower government debt, such as Malta, Ireland, Slovakia, Luxembourg.

Figure 2: Government Debt to GDP Ratio in Eurozone Countries



Source: Eurostat (2020); own elaboration (2020)

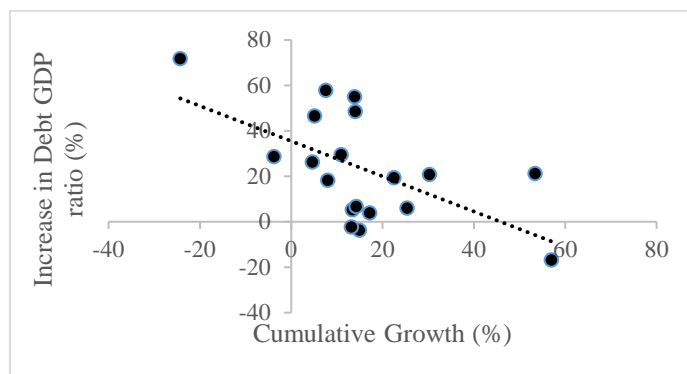
It seems interesting to calculate the increase in government debt-to-GDP ratio in the period under review. Table 1 shows the increase in the government debt-to-GDP ratio between years 2008 and 2018 for all Eurozone countries. Once again, we see great differences between countries. The largest increase in government debt is apparent in Greece and stands at 71.8%. Government debt increased by more than 50% in Spain and Cyprus. Only in the Netherlands, Germany and Malta did government debt decrease in the reference period.

Table 1: Increase of Government Debt to GDP Ratio (2008-2018, in %)

	2008	2018	Increase
Greece	109,4	181,2	71,8
Spain	39,7	97,6	57,9
Cyprus	45,6	100,6	55,0
Slovenia	21,8	70,4	48,6
Portugal	75,6	122,2	46,6
France	68,8	98,4	29,6
Italy	106,1	134,8	28,7
Finland	32,6	59,0	26,4
Ireland	42,4	63,6	21,2
Slovakia	28,6	49,4	20,8
Lithuania	14,6	34,1	19,5
Latvia	18,1	36,4	18,3
Belgium	93,2	100,0	6,8
Luxembourg	14,9	21,0	6,1
Austria	68,7	74,0	5,3
Estonia	4,5	8,4	3,9
Netherlands	54,7	52,4	-2,3
Germany	65,5	61,9	-3,6
Malta	62,6	45,8	-16,8

Source: Eurostat (2020); own elaboration (2020)

Thus, from the above analysis, we see the relationship between cumulative economic growth and government debt. Countries most affected by the crisis are facing higher government debt-to-GDP ratio rates and are fighting with greater increases in government debt as well. In an environment of a single monetary union, this asymmetric shock can be a major problem in restoring economic balance. There is a well-known saying that one monetary policy does not fit all.

Figure 3: Cumulative Growth and Debt Ratios in Eurozone Countries (2008-2018)

Source: Eurostat (2020); own elaboration (2020)

Using the following regression analysis, it was found that there was a negative relationship between the increase in government debt and cumulative economic growth. In general, the lower the economic growth, the higher the government debt growth. Countries experiencing a sharp decline in GDP faced major public finance problems.

De Grauwe (2011) also points out the need to distinguish between permanent and temporary asymmetric shocks. If a demand shock is a permanent asymmetric shock, a monetary union member country needs flexible wages and sufficient labour mobility to restore economic balance, more Mundell (1961). In the event of a temporary asymmetric shock, the Monetary Union faces unsynchronised business cycles. Already from the historical experience, for example, we know that the reason for the termination of the Scandinavian monetary union were just different economic cycles. The danger for Member states facing temporary asymmetric shock is that their economies are susceptible to changes in market sentiments. In a situation where a country is facing an economic downturn and an increase in government debt, financial markets can respond to this situation by losing confidence and requiring an increase in long-term government bond yields. This further plunges the country into additional austerity measures (raising tax rates, reducing government spending, etc.). Moreover, thanks to all this, such countries can run into the liquidity crisis described in the text.

5. Conclusion

The paper dealt with the issue of asymmetric shocks in the context of incomplete monetary union. The theoretical basis for the analysis was Robert Mundell's classic contribution to the optimality of monetary areas. Since the 1960s, the issue of OCA has been extensively discussed in professional circles and numerous scientific publications have been written on the subject. However, in connection with the outbreak of the financial crisis and the subsequent Great Recession, new contexts have emerged, which the previous research did not sufficiently reflect. For a country that is part of an incomplete monetary union, membership can be very costly. If the monetary union does not have a common fiscal policy, or at least sufficient coordination and enforceability of the rules, then in the event of an asymmetric shock, it gets into an increasingly deep problem.

The aim of the article was to verify the relationship between the increase in government debt and economic growth in an incomplete monetary union environment, assuming an asymmetric shock. It was found that there is a negative correlation between economic growth and an

increase in government debt. Using regression analysis tools, low economic growth (or even decline) has been shown to have a negative effect on the increase in the government debt-to-GDP ratio. Countries that experienced economic recovery in 2008-2018 increased the government debt-to-GDP ratio very little (in the Netherlands, Germany and Malta did government debt decrease in the reference period even). Conversely, countries facing economic downturns (Italy, Greece) recorded a significant increase in the government debt ratio. In addition, these countries were characterized by higher government bond yields, which grew in response to the sentiment of financial markets. Countries were all the more forced to introduce painful austerity measures, and membership of the monetary union became very costly for them.

In connection with the paper objective, the hypothesis was set: "In an environment of incomplete monetary union, states face substantial costs to restore economic balance." It was found that changes in financial market sentiments might be very dangerous for a member country facing temporary asymmetric shock. Financial markets can respond to economic recession in such country by losing confidence and requiring an increase in long-term government bond yields. Additional austerity measures and the threat of liquidity crisis emerge. The subject of further research on this issue is to verify whether it is possible for the Eurozone to be able to function without a single fiscal policy, based only on a sufficiently strong fiscal rule and functional insurance mechanisms.

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Growing Protectionism in World Trade: How Effective Was the EU Trade Policy of Juncker's Commission?

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Abstract

The paper deals with trade protectionism that affected the EU exports in the time when J. P. Juncker was the president of the European Commission and its priority was to adopt a progressive trade policy. The purpose of the paper is to map the barriers to the EU exports in 2016–2018 for which data were available in the same structure and to record the successfully resolved barriers by Juncker's administration at the same time. The results of the analysis showed 51 countries that had resorted to 148 barriers to the EU exports and, at the same time, the Commission resolved 100 barriers with 40 countries. Agriculture and fisheries was the sector which was the most affected by trade barriers, although the highest number of tackled barriers in this sector was also registered. Research in this area will be desirable in the future also with respect to the growing protectionism in world trade; thus, a quantitative analysis based on values of trade affected by barriers, instead of numbers of barriers, is the way how to develop research in this area.

Keywords: barrier to trade, European Union, protectionism, trade policy, WTO

JEL Classification: F13; F15; F63

1. Introduction

The history of world trade showed that protectionism leads to an ineffective use of sources and slower economic growth. However, some governments ignore this fact and, in an effort to support and protect domestic production and jobs, they use barriers to trade. This is obvious especially in times when economic crises, wars or some epidemics occur in the world. And these situations are just occurring in the world economy now. Although the previous WTO General Director, Pascal Lamy, warned against protectionism (WTO, 2008), when the economic crisis occurred in 2008–2009, the G20 countries broke the “no protectionism” vow (Bettie, 2009) and took new measures with distorting effects on world trade. The WTO (2019) estimates that the trade coverage of import restrictive measures implemented since 2009 and still in force by October 2019 has reached USD 1.7 trillion. Trade tension has been obvious especially among the leading traders, such as the USA and China, which started after Donald Trump became U.S. President in 2016 due to a huge trade imbalance in their trade. However, the trade war between the USA and China is not the issue of only the world's two largest economies, it has implications for the whole world (Brocková, K., Lipková, Ľ, 2018), including the European Union (EU) that has also recorded a trade tension with the USA in the last years.

The EU has been the proponent of trade liberalisation in the world for a long time, although it also protects some sensitive products in its internal market by tariff peaks. In the last five years,

when Jean Paul Juncker was the president of the European Commission, the EU had to face growing protectionism in the world. At the same time Juncker's Commission advertised "A balanced and progressive trade policy to harness globalisation" (European Commission, 2018a; European Parliament, 2019). This idea was based on the creation of two-way street trade in which the EU exporters must benefit from a reciprocal market access abroad (European Commission, 2019). It was at the same time in which the Commission also had to solve many internal issues connected with the European governance (see Navrátil, 2018).

The purpose of the paper is to map the barriers to the EU exports in 2016–2018 for which data were available in the same structure and to record successfully resolved barriers by Juncker's administrative at the same time. The results of the analysis will show which countries resorted to protectionism and which sectors were the most often affected by trade protectionism in the monitored period. Firstly, the methodology of the trade policy analysis will be introduced. Secondly, the trade restrictiveness to the EU exports will be analysed in a geographical and sectorial breakdown. Finally, the main conclusions about the efficiency of the EU trade policy of Juncker's Commission will be introduced and the area of future research will be outlined.

2. Problem Formulation and Methodology

The roots of protectionism belong to the mid-16th century in which the mercantile ideas started to be developed. However, the ideas about international trade have been changing during the development of the world economy and also new trade theories were formulated firstly by the classical and neo-classical economists, who were proponents of free trade, and later, in the 19th–20th century, this was followed by some protectionist theories, from which the most famous were formulated by F. List, R. Prebisch, J. Bhagwati, etc. As protectionism has had its advocates as well as opponents all the time, and the current development shows protectionist tendencies on the rise all over the world, this issue is also the subject of empirical research. Articles are currently very often focused on the U.S. trade protectionism in connection with Donald Trump's presidency. For example, Brocková, K., Lipková, Ľ (2018, p. 324) analyse the causes of the current U.S. protectionism from different aspects and conclude that "protectionism has only a short term positive effect on a limited number of economic players (increase in the production volume, increase in employment); the long-term negative effects are, however, far more extensive for national economies and the world economy as a whole". Trump's policy prioritising trade deficit in U.S. trade policy is also analysed by Park and Stangarone (2019). Besides the U.S. trade policy, these authors explore the implication of the abrogation of the U.S. global economic leadership for the international trading system and U.S. influence more broadly. Based on the political economy research, Aaken and Kurtz (2019) identify the key distortions that can better explain voters' and politicians' behaviour in the current trade wars. Based on the sectorial analysis, Marel (2019) focuses on barriers to digital trade and states that "they have the same effect as standard barriers to trade in goods, i.e. they protect incumbent firms at the expense of consumers". Fojtíková (2016) shows an overcapacity in some sectors, such as that the steel industry also leads to protectionism in world trade.

Although the negative effects of protectionism have been confirmed by history, traditional as well as new forms of protectionism in world trade exist all the time. In order to identify and depict changes in the level of protectionism in the world, different classifications of tariff and non-tariff barriers (see for example the UNCTAD or the OECD classification) and databases about trade policy measures (see the I-TIP portal in the WTO or the Trade Facilitation Indicators in the OECD) were created. The European Commission distinguishes two groups of measures with a disruptive effect to trade, i.e. border measures and behind the border measures. Behind the border measures are restrictions related to services, investments, government procurement, intellectual property rights or unjustified technical barriers to trade

in goods. Border measures are restrictions that directly affect imports and exports, typically through tariff increases, quantitative restrictions, certain sanitary and phytosanitary measures, import licensing or through outright trade bans (European Commission, 2018b). The Commission observes the occurrence of barriers to trade through the Market Access Partnership and records them in the Market Access Database. The Market Access Partnership was set up in 2007 to deepen the cooperation between the Commission, Member States and EU business both in Brussels and locally. Stakeholders meet at monthly meetings of the Market Access Advisory Committee and sectorial Market Access Working Groups in Brussels and regular meetings of the Market Access Teams or Trade Counsellor's meetings in third countries. (European Commission, 2019).

Besides the existence of different classifications and databases of trade barriers, special indexes were also developed for dealing with trade policy analyses. The International Monetary Fund (IMF) had already developed the first Trade Restrictiveness Index (TRI) for use in 1997 and its review version was introduced in 2005. The IMF's TRI consists of three components, i.e. the Overall Trade Restrictiveness Index, the Tariff Restrictiveness Rating, and the Nontariff Restrictiveness Rating. The Overall Trade Restrictiveness Rating is a ten-point scale arrived at by combining the Tariff Restrictiveness Rating and the Nontariff Restrictiveness Rating. On the scale of one to ten, the overall rating of countries with the value "one" indicates countries with the most open trade policies, and a "ten" the overall rating of countries with the most restrictive policies. The ratings are frozen at the end of each year, creating a cross-country time series of trade liberalisation efforts over time. However, the cross-country comparison of index values for individual countries can be misleading due to many methodological shortcomings, and, thus, the IMF has not actively published the index (IMF, 2005). The Property Right Alliance developed the Trade Barriers Index (TBI) as a sister of the previously introduced International Property Rights Index. The TBI evaluates countries on their use of tariffs, non-tariff measures, services restrictions, as well as their ability to facilitate trade through several components, such as property rights, logistics, digital freedom, and participation in regional trade agreements. The research includes trade restrictions in 86 countries, representing 83 percent of the world's population responsible for 91 percent of all traded goods and services, and 94 percent of the world GDP (Thomson, 2019). Sometimes, international trade (or, more precisely, trade freedom and trade openness) is the only component of more complex indexes, such as the Index of Economic Freedom issued by the Heritage Foundation or the Global Competitiveness Index, which is introduced annually in the Global Competitiveness Report issued by the World Economic Forum.

The methodology of this paper is based on the EU classification of trade barriers, i.e. border measures and behind the border measures. The analysis covers different economic sectors that are available in the Market Access Database (see European Commission, 2020). This is a two-way analysis that includes barriers that were introduced to the EU exports by third countries and barriers that were resolved by the European Commission in the same monitored period. Barriers to the EU exports are analysed in the geographical and sectorial structure. Although the Juncker's administrative operated in 2014–2019, the trade analysis covers only the period 2016–2018, i.e. the period for which the data are available in a desirable structure in order to be cumulated and compared.

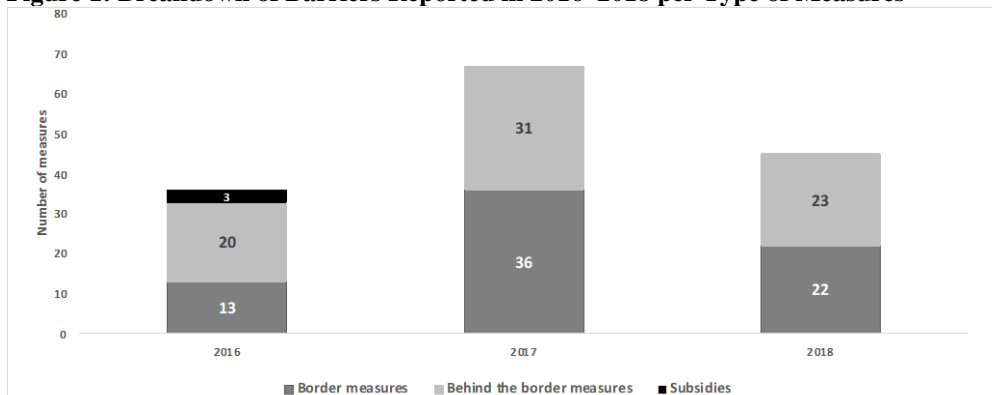
3. Trade Analysis

The trade analysis is divided into two parts. In the first part, the new trade barriers that affected the EU exports in 2016–2018 are explored in a geographical and sectorial breakdown. In the second part, the trade barriers that were resolved by the Commission in the monitored period are analysed in the same structure.

3.1 New Trade Barriers

In 2016–2018, the European Commission recorded 148 new trade restrictive measures in trade relations with third countries. The predominant part of barriers has the form of behind the border measures. The highest number of barriers, i.e. 67, was registered in 2017 in which, however, the number of traditional trade barriers faced by EU exporters at customs surpassed behind the border measures. The structure of barriers in the monitored period is graphically shown in Figure 1.

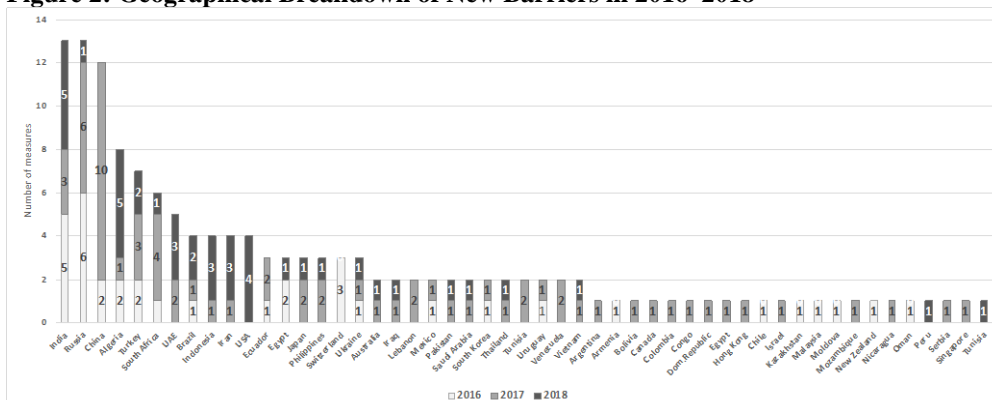
Figure 1: Breakdown of Barriers Reported in 2016–2018 per Type of Measures



Source: own elaboration

The EU reported the highest occurrence of new barriers in the monitored period in trade and investment relations with India and Russia (13 each), followed by China (12). Algeria, Turkey, South Africa and the United Arab Emirates (UAE) resorted to five up to eight barriers individually. In another 23 countries the EU recorded from 2 to 4 measures. The remaining 22 countries resorted to only one barrier to the EU exports. From the total 51 countries that resorted to some type of trade barrier to the EU exports (see Figure 2), 13 countries, namely India, Russia, China, Turkey, South Africa, Brazil, Indonesia, USA, Japan, Australia, Mexico, South Korea and Canada, are members of the Group of Twenty (G20).

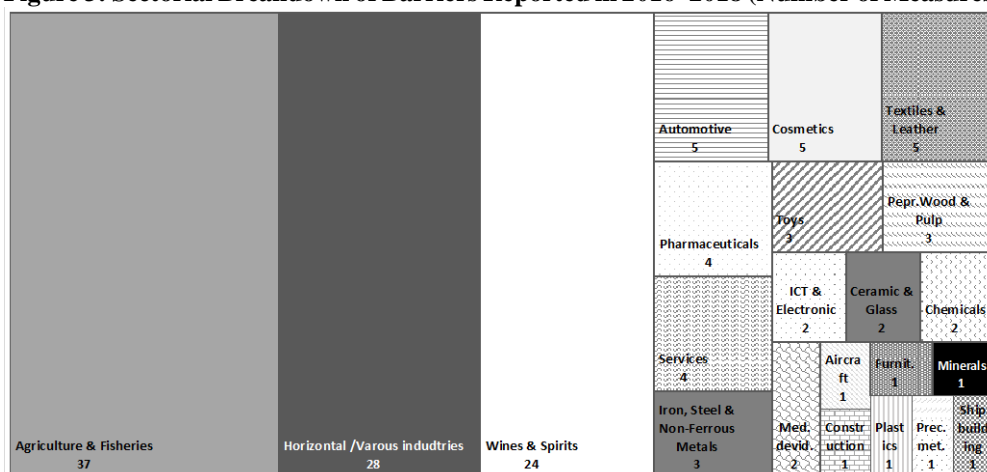
Figure 2: Geographical Breakdown of New Barriers in 2016–2018



Source: own elaboration

From the sectorial point of view, in 2016–2018 the EU registered the highest number of barriers to trade in the *agriculture and fisheries* sector (37), followed by *horizontal barriers* affecting several sectors (28). The EU also recorded 24 new barriers for the *wines and spirit* sector. These three sectors share in the total number of new barriers by more than 65%. For each of the *automotive*, *cosmetics* and *textile and leather* sectors five new barriers were recorded. Individual barriers were reported in *pharmaceuticals* and *services* (four each). Figure 3 shows a complex view on barriers that were registered by the EU for the individual sectors of economic activity in the monitored period.

Figure 3: Sectorial Breakdown of Barriers Reported in 2016–2018 (Number of Measures)

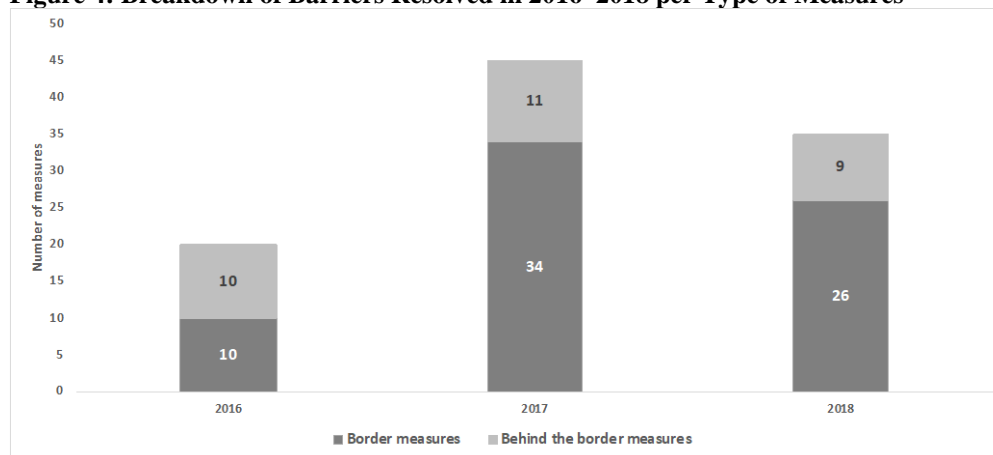


Source: own elaboration

Although the number of barriers to the EU trade and investment was the highest in 2017 (see Figure 1), the estimated economic impact of barriers was the highest in 2018, amounting to 51.4 billion euros, which was more than double compared to 2017 (23.1 billion euros) (European Commission, 2019). Trade flows affected by the new barriers in 2016 amounted to about 27 billion euros (European Commission, 2017).

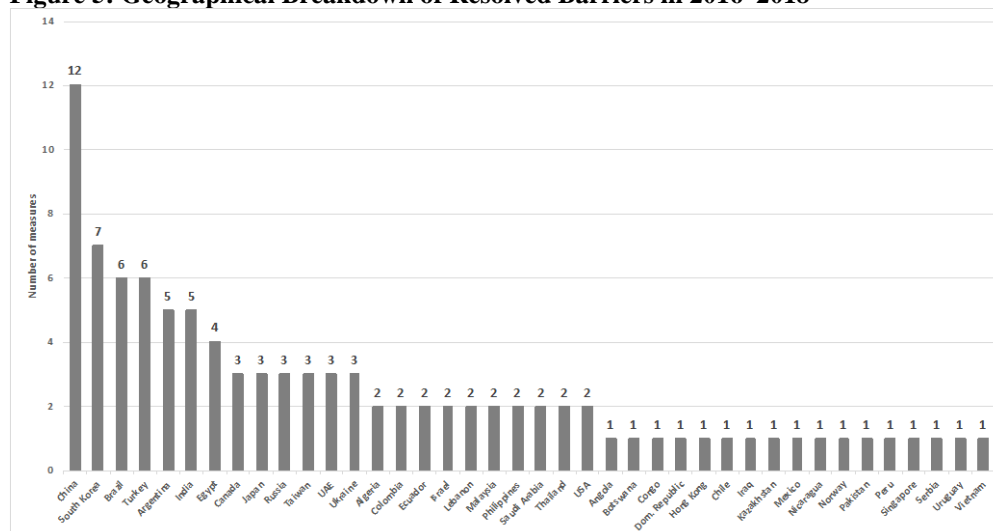
3.2 Resolved Trade Barriers

Thanks to the combined efforts of all Market Access Partnership stakeholders, the European Commission negotiated with partners in third countries removing 100 trade restrictive measures in 2016–2018. From the total number of resolved measures, 70 barriers had the form of border measures (see Figure 4). The highest number of resolved cases was recorded in 2017, i.e. a total of 45 in comparison with 20 in 2016 and 35 in 2018. In total, the trade flows potentially affected by removed trade barriers were about 20 billion euros in the period 2016–2018, i.e. 4.2 billion euros in 2016 (European Commission, 2017), 8.2 billion euros in 2017 (European Commission, 2018b) and 7.8 billion euros in 2018 (European Commission, 2019).

Figure 4: Breakdown of Barriers Resolved in 2016–2018 per Type of Measures

Source: own elaboration

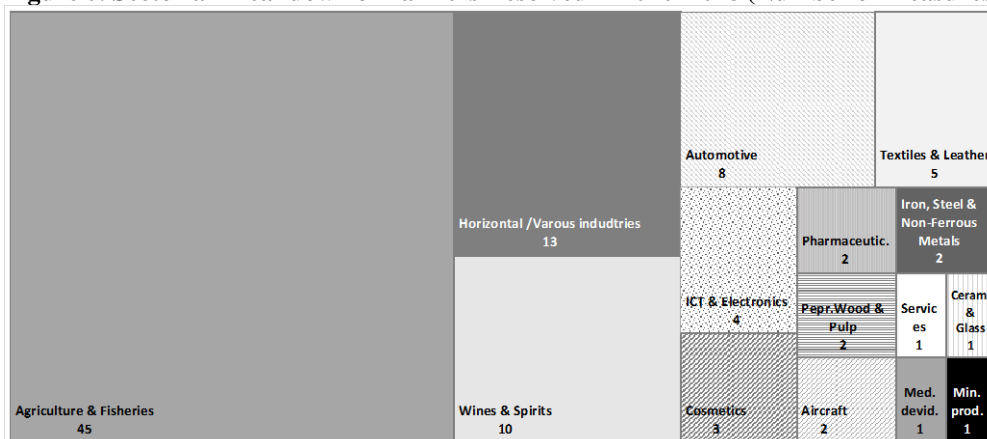
The Commission's negotiations with third countries brought positive results. Barriers were resolved in forty countries around the world. Figure 5 illustrates the third countries where barriers were most successfully tackled in the monitored period. China was first in line with twelve barriers resolved in 2016–2018, followed by South Korea (seven), Brazil and Turkey (six each), Argentina and India (five each) and Egypt (four). Also, in Canada, Japan, Russia, Taiwan, the United Arab Emirates and Ukraine three registered barriers were tackled. Trade barriers were also resolved with another 37 countries, which are shown in Figure 5 and which had removed one or two barriers each.

Figure 5: Geographical Breakdown of Resolved Barriers in 2016–2018

Source: own elaboration

Figure 6 provides an overview of the main economic sectors in which barriers were resolved in the period 2016–2018. *Agriculture and fisheries* was the sector with the most measures resolved, i.e. almost a half of all resolved barriers in the monitored period. Second in line were *horizontal barriers* that affected various industrial sectors (13) and third in line were *wines and spirits*, which represented ten resolved barriers during the same period. The *automotive* sector accounted for eight resolved barriers. Furthermore, the individual barriers that the Commission resolved in several other sectors are shown in Figure 6.

Figure 6: Sectorial Breakdown of Barriers Resolved in 2016–2018 (Number of Measures)



Source: own elaboration

4. Conclusion

In 2016–2018, the EU registered 148 new barriers to the EU exporters in third countries, while the number of resolved barriers reached a hundred. However, this does not give a complex picture about the current protectionism to the EU exporters with respect to the fact that the Market Access Database (MAD) currently includes 513 different measures in the individual sectors of economic activity (until March 2020). In addition, the MAD registered only those barriers that the EU Members States or their exporters announced to the Commission and, thus, their number can be even higher. The objective of this paper was only to map protectionism (according to countries and sectors) from the available sources at the selected time when Juncker's Commission had a mandate, and to show the number of successfully resolved barriers by Juncker's administrative in their geographical and sectorial structure.

While behind the border measures were the most common type of new barriers in the monitored period, Juncker's Commission was more effective in resolving border measures. In total, 51 countries resorted to some barrier to EU trade in 2016–2018, especially India, Russia and China resorted to the highest number of new barriers. The Commission was successful in removing barriers in 40 countries. The Commission resolved the highest number of measures in China, South Korea, Brazil, Turkey, India, Argentina and Egypt. These seven countries share by almost a half in all tackled measures. *Agriculture and fisheries* was the sector with the highest number of new barriers that the Commission registered in the monitored period, but also the area in which the Commission was the most effective in tackling barriers.

However, besides resolving barriers to trade, the progressive trade policy of Juncker's Commission focused on trade liberalisation. As the WTO negotiations were stagnating and its dispute settlement system and the Appellate Body were in crisis (Brocková, K., 2018), the EU

had decided to pursue bilateral trade agreements, such as the EU-Canada Comprehensive Economic and Trade Agreement (CETA), the EU-Japan Economic Partnership Agreement (EPA) and with other countries the trade negotiations continued. Thus, negotiations with Australia and New Zealand were formally launched in June 2018, the modernisation of the Global Agreement with Mexico was reached in April 2018 and other negotiations with Mercosur, Indonesia, the Philippines, Chile, Vietnam and West African countries were launched and pursued during the Juncker Commission as well (European Parliament, 2019). In terms of the USA, although the EU had several conflicts with the Trump administration, which stopped the negotiation about the Transatlantic Trade and Investment Partnership (TTIP) with the USA in 2017, trade negotiations with the USA re-emerged in 2018 and a trade agreement on industrial goods and a conformity assessment were signed. These deals helped to avoid further escalation between both world leading traders. Negotiations with another EU's important partner, China, were held only about the bilateral investment agreement. The Juncker Commission also proposed the creation of a new investment court system as an integral part of new free trade agreements and the establishment of a permanent multilateral investment court under the UNCITRAL. The objective of this paper was not to analyse the effectiveness of these agreements, but to show negotiations about trade liberalisation usually contributing to tackling barriers to trade.

In the future, research should focus on the individual trade flows that affect the EU exports or imports with third countries taking into account specific partners as well as sectors. However, the analyses carried out in this area will always have some limits with respect to the fact that some barriers remain too difficult to identify and measure.

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The Influence of Institutional Architecture on Social Cohesion in the European Union – Selected Aspects

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Abstract

Integration processes in European Union must include not only integration of market mechanisms existing in individual societies, but also consolidation of institutional architecture. There are determinants that influence the institutional architecture, which is also the environment for social cohesion and possibility to build social capital between various entities. The main purpose of the paper is to identify the determinants (legal, social, economic etc.), that influence social cohesion in the European Union. The basic methods used in this paper are secondary research (critical review of the literature, desk research) and primary research. The article is divided into two parts: theoretical and empirical one. In the theoretical part the main purpose is to identify the most important determinants influencing the institutional architecture, which is the environment for social cohesion. The empirical part presents some aspects of institutional architecture that influence European Union Social Cohesion over the last few years.

Keywords: economic development, economic systems, European Union, integration processes, welfare

JEL Classification: I30, O10, P30, Z10

1. Introduction

Institutions are the rules of the game, according to which business entities operate. They are expressed in formal and informal norms that constitute the code of conduct for entities. Informal institutions are certain ideas deeply rooted in the mentality of societies. They determine the way in which reality is interpreted. Consolidation of informal institutions gradually transforms into the customary wide-spread rules of conduct of the market players in given communities, and over time these rules obtain the designation of laws and regulations aimed at protection of market participants.

The institutions defined in this way perform specific functions, that include among others (Stankiewicz, 2012, p. 50):

- controlling human behaviour so that individuals do not harm each other or possibly compensate for damage caused;
- reducing transaction costs by facilitating contacts between entities and access to the market;
- organizing the process of information transfer and facilitating the learning process.

The institutions perform one more important function in the socio-economic process of the community. An institution as a certain exogenous factor in relation to the individual limits their freedom and freedom of action. Traditions, customs and laws, coded and accepted by a given community, imply certain orders or prohibitions towards human will, thus becoming a certain restriction on the freedom of choice of an individual. Institutions operating in this way are characterized by certain permanent features. The institutions are, among others:

- a network of explicit and implicit relationships / correlations that have a double impact: on the one hand they influence the decisions of individuals, while on the other hand they shape the rules of collective life,
- both the natural mechanism of community organization and the artificial result of the evaluation performed by individuals in the form of formal solutions (Gruszevska, 2011, p. 105),
- determined by the institutional environment in which they emerge (this is about culture, religion, history),
- inherited in specific communities,
- difficult to control because of the problem with the accurate determination of the limit of their impact,
- the behaviours resulting from institutions are repetitive, which implies the possibility of predictability of the behaviours of other parties to the relationship.

Durability, continuity and stability of the system of establishing institution (even though the very institutions can change in various time horizon) brings ensuring freedom and security for the activities of individuals, and thus the predictability of the results of their activities (within certain limits) (Stankiewicz, 2012, p. 53).The last of the abovementioned attributes of institutions implies one more important feature – i.e. the fact that in conditions of information asymmetry, institutions can reduce uncertainty of the activities of individuals, which also leads to reduction in transaction costs. A stable and durable institutional architecture in which social relations are shaped is the basis of social cohesion. The purpose of the following study is an attempt to present institutional architecture in selected states of the European Union and an attempt to answer the question whether such a diverse institutional environment provides the opportunity to build relationships and sustainability of social relations. Such formulation of the goal allowed to formulate the research hypothesis that societies with highly developed economies and stable institutional infrastructure have the greatest opportunities for the development and sustainability of social relations. The study mainly uses the analysis of classical and contemporary literature and desk research methods.

2. Problem Formulation and Methodology

Indicators prepared by global organizations presenting individual aspects of social and economic life such as: life satisfaction, economic well-being, quality of health protection, level of security, level of education as well as the level of income and environmental pollution are used in quantitative analyses aimed to determine the level, quality, sustainability or effectiveness of the institutional architecture, which affects, among others social cohesion. Selected measures will in further part be used to conduct the subject analysis regarding the quality of institutional infrastructure in selected European Union countries. (Grabowska-Powaga, 2018, pp. 332 and further).

The Index of Economic Freedom used by The Heritage Foundation (Miłaszewicz, 2011, pp. 18 and further, Hrynievicka, 2018, p.483) can be used in the analyses of the quality of institutional infrastructure.

As regards formal institutions, the measures of their stability, durability and efficiency include the following:

- rule of law (such as property rights, government integrity, judicial effectiveness);
- government size (such as government spending, tax burden, fiscal health);
- regulatory efficiency (such as business freedom, labour freedom, monetary freedom);
- open markets (trade freedom, investment freedom, financial freedom).

On the other hand, informal institutions are measured by the Freedom House organization through the law in the area of politics and civil liberties. The rights in the sphere of politics include:

- electoral process,
- political pluralism and participation,
- functioning of the government.

Civil liberties in turn are measured by:

- freedom of expression and belief,
- associational and organisational rights,
- rule of law,
- personal autonomy and individual rights.

Just like in the case of formal institutions, the organization awards a maximum of 100 points for architecture built from informal institutions, a maximum of 40 points for the rights in the sphere of politics, and 60 points for civil liberties. The adopted scoring allows for similar classification of the studied economies in terms of the criterion of economic and social freedom. The conducted research leads to the conclusion confirming the research assumption adopted at the beginning. In the countries characterized by a high level of social capital, almost all informal institutions shaping the rights in the sphere of politics and civil liberties are assessed. They imply the functioning of free states in the context of social and economic development. In the case of the European Union, these are the countries of the Western and Northern Europe, which are characterized by the values that are deeply rooted in the societies and include democracy, freedom of the individual, the good of the individual or the role of social capital in socio-economic development and achievement of both common and individual goals. Western European societies show a higher level of individual trust in each other and institutions, which also translates into the efficiency of economic processes (less bureaucracy, lower transformation costs). The least developed informal institutions are characteristic of the post-transformation countries that learn the values of democracy or freedom of the individual and they are the societies with a low level of trust of individuals in each other and in public institutions. In communities where the infrastructure of informal institutions is unstable (the low or very low level of trust in others, which causes reluctance, passive attitudes, often turning into aggressive, unpleasant and passive attitudes caused by the lack of security in the presence of uncertainty brought by an individual or group they do not know can be an example here) greater trust is given by individuals to such formal institutions that are to eliminate threats or lack of uncertainty in the institutional environment. (see tab. 1) The quality of formal institutions (European Economic and Social Committee [online], 2020) that guarantee or limit the possibilities of cooperation between individuals and business entities, and thereby create a certain code of social game, which may result in social capital, is important in the context of social cohesion. The code that is stable, rooted in informal institutions and gives a sense of security, activates business entities to establish relationships, enhance them and consciously build the potential of social capital. The code of the social game, or rather in this case a set of regulations that is unstable, detached from informal institutions, limiting the freedom and economic security of individuals and entities, hampers, discourages

or even prevents establishing relationships and the willingness to cooperate between individuals and business entities. And consequently, this affects the low level or lack of social capital in a given society. (Grabowska-Powaga, 2019, pp. 215-216). As regards the European Union, formal institutions that are the most stable, and at the same time constitute the basis for the code of the social game, are again found in Western and Northern Europe, while the weaker are observed in Southern and Central Europe (see Table 2).

Table 1: Quality of Informal Institutions in Chosen Countries of European Union

European Union Countries	INFORMAL INSTITUTIONS						
	Political Rights			Civil Liberties			
	Electoral Process (max 12 points)	Political Pluralism and Participation (max 16 points)	Functioning of Government (max 12 points)	Freedom of Expression and Belief (max 16 points)	Associational and Organizational Rights (max 12 points)	Rule of Law (max 16 points)	Personal Autonomy and Individual Rights (max 16 points)
Countries with the highest index							
1. Sweden (100)	12	16	12	16	12	16	16
2. Finland (100)	12	16	12	16	12	16	16
3. Netherlands (99)	12	16	12	16	12	15	16
4. Luxembourg (98)	12	16	10	16	12	16	16
5. Denmark (97)	12	16	12	16	12	14	15
Countries with the lowest index							
1. Hungary (70)	9	11	7	10	10	10	13
2. Bulgaria (80)	11	14	8	14	11	10	12
3. Romania (81)	11	14	9	13	10	12	12
4. Poland (84)	11	16	8	14	10	11	14
5. Croatia (85)	12	14	10	13	12	11	13

Source: own study based on *Freedom in the World 2018*, Democracy in Crisis, Freedom House accessed at www.freedomhouse.org (downloaded 25th January 2020)

Table 2: Quality of Formal Institutions in Chosen Countries of European Union

European Union Countries	FORMAL INSTITUTIONS											
	Rule of Law			Government size			Regulatory efficiency			Open markets		
	Property Rights	Judicial Effectiveness	Government Integrity	Tax Burden	Government Spending	Fiscal Health	Business Freedom	Labour Freedom	Monetary Freedom	Trade Freedom	Investment Freedom	Financial Freedom
The highest rating												
1. Ireland (6)	85.8	68.4	78.0	76.3	77.4	89.0	83.1	75.3	87.0	86.0	90.0	70.0
2. United Kingdom (7)	92.3	85.9	83.8	64.7	48.2	68.6	92.9	73.5	81.2	86.0	90.0	80.0
3. Netherlands (13)	88.0	74.7	89.1	51.6	42.9	93.3	81.4	60.3	84.0	86.0	90.0	80.0
4. Denmark (14)	86.2	77.8	85.8	42.0	14.4	96.7	90.7	86.4	84.1	86.0	90.0	80.0
5. Estonia (15)	81.5	76.0	73.1	79.9	51.1	99.8	75.3	57.2	79.6	86.0	90.0	70.0
.....												
The lowest rating												
1. Greece (106)	52.4	49.5	37.7	59.1	23.3	79.0	74.1	52.5	79.1	81.0	55.0	50.0
2. Croatia (86)	66.0	42.9	38.6	66.4	33.4	85.4	60.7	44.0	78.5	86.0	75.0	60.0
3. Italy (80)	71.7	49.8	43.7	55.6	26.5	71.3	71.7	51.1	84.0	86.0	85.0	50.0
4. France (71)	82.5	66.1	67.9	48.4	3.9	64.9	81.2	45.2	79.1	81.0	75.0	70.0
5. Slovakia (65)	68.5	37.2	37.7	78.6	46.1	87.2	61.3	53.4	78.6	86.0	75.0	70.0

Source: own study based on T. Miller, A.B. Kim, J.M. Roberts: *2019 Index of Economic Freedom*. 25th Anniversary Edition, The Heritage Foundation, Washington USA, p. 75 and further

3. Problem Solution

Social cohesion of the citizens of the European Union, its strength, and the role it performs in business processes is determined by the institutional environment in which it emerges. It is often formed in such societies that are not embedded in the stiff framework of formal institutions that would discourage establishment of relationships and cooperation with other entities. On the other hand, the institutional environment depends on many determinants of cultural, historical and economic character (it also depends on the access to the resources of entities participating in socio-economic processes).

Although the sphere of informal institutions in the whole structure of institutional architecture places the countries of the European Union high in the rankings of the quality of institutional infrastructure among the countries around the world, the sphere of formal institutions especially in the countries of Central and Southern Europe and their questionable quality discourage and limit the ability of individuals and business entities to cooperate and achieve common goals and mutual benefits in other EU countries. This, in turn, implies some restrictions and barriers in shaping the social cohesion of the EU residents.

4. Conclusion

Presented fragments of secondary research do not allow for formulation of a general conclusion. However, they are a valuable source of information that bridges the gap between the theory and the empirical layer concerning the real level and quality of institutional infrastructure in the countries of the European Union and its impact on the process of social consolidation of the EU citizens.

Although the spectrum of variables adopted for the analysis is broad and each indicator emphasises different, arbitrarily selected features of given economies and societies, there appears the conclusion confirming the research assumption adopted in the introduction of the study that in the group of countries with the highest values of the analysed indicators there are most often developed countries that are characterized by a democratic system of values and operate within the so-called market economies. Western and Northern European countries dominate here. Lower values of indicators can be observed in the countries of Central, Eastern and Southern Europe, which may prove existence of the institutions that are rooted in the model of centralized economies (weaker or no awareness of democracy). This research needs to be continued by the author in future papers and the problem expanded with the analysis for such questions: what are the priorities of the new European Commission in the area of cohesion policy agenda and who is responsible for it? What are the new problems concerned with the European Union Social Cohesion like what is the level of current negotiation about the EU common budget for the next years, what tasks need to be done to improve Social Cohesion in EU, what are the consequences for European Social Cohesion in the terms of the geopolitical problems like epidemiology, refugees, economic recession.

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Impact of the Free Trade Agreement between the European Union and the Republic of Korea on Mutual Trade Relations

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Abstract

The paper deals with the mutual trade relations between the EU and the Republic of Korea. Mutual trade relations between the EU and the Republic of Korea are currently governed by the free trade agreement that was signed by twenty-seven EU member states and Republic of Korea on October 6th, 2010. Both the EU and the Republic of Korea are one of the most important economies ranking in the top 20 economies in the world in the 21st century. Trade flows based on the HS Code are analyzed from sections of the HS Code down to HS 6-digit classification. We come to conclusion that Korean trade relations with the EU member states are asymmetrical in favor of old EU members states in both exports and imports. The changes in the trade structure after the free trade agreement was signed are also observed in the paper.

Keywords: EU, FTA, Korea, trade

JEL Classification: F10, F14, F15

1. Introduction

The European Union (EU) and the Republic of Korea (RoK) are two of the most important subjects in the current world economy. Based on the data provided by WDI (2020), the EU ranked second with 16.2% share in total world gross domestic product in purchasing power parity (PPP GDP) with the RoK ranking eleventh with a total share of 1.6% in 2018. However, after decomposing the EU into its individual member states, we note the drop for the RoK from eleventh to fourteenth place with large EU economies overcoming the RoK – Germany in fifth place with a share of 3.2%, United Kingdom in ninth place with 2.2%, France in tenth place with a 2.2% share and Italy ranking twelfth with 1.8%.

Mutual trade relations between the EU and the RoK are governed by the free trade agreement between the EU and the RoK which was signed by twenty-seven EU member states and the RoK on October 6th, 2010 (Legislation, 2011, p. 74). However, the steps to the signing of the agreement date back to 2007, when the Council of the EU authorized the European Commission to negotiate a free trade agreement with the RoK. The agreement was later initialed in October 2009 and finally signed in October 2010. According to EC (2019), the agreement was provisionally applied since July 2011 with a formal ratification in December 2015. This was the first free trade agreement signed by the EU with any Asian country. Based on the annexes to the agreement (Legislation, 2011, p. 82-1412), most import duties in both economies were removed in 2011 and the remaining duties, except for some agricultural products, were removed by July 2016. All customs duties in industrial goods were to be removed within the first five years of the FTA implementation. When taking into consideration

also the agricultural products, 98.7% of duties in trade value were supposed to be eliminated with highly sensitive agricultural and fisheries products having a longer transitional period (EEAS, 2016). Chung and Lee (2019) explore the developments in the EU-RoK strategic partnership based on key pillars of politics, economics and security cooperation. They find the original pillars like the FTA leading to stable and mature bilateral relations. Decreaux et al. (2010) proposed quantitative assessment of the EU-RoK FTA. Their main findings show that the EU may increase trade performance in industries like chemicals, machinery, other manufactured and food products, while the RoK may benefit in specific manufactured products like textiles, leather/clothing, cars and other transport equipment. Lakatos and Nilsson (2017, p. 194) come to conclusion that the probability to export duty-free goods and the value of such exports have been positively impacted by the agreement. Regarding more general approach to FTAs and East Asia, Molders and Volz (2011) focus on trade impact of FTAs on East Asian economies. They come to conclusion that there exist anticipatory effects preceding the actual implementation of bilateral FTAs while these anticipation effects are larger for bilateral than for multilateral agreements. More regional approach is taken by Kocourek and Simanova (2018) who assess the impacts of the FTA between the EU and Vietnam on the economy of the Czech Republic concluding a very small change in aggregate performance of the Czech economy caused by the impacts of the FTA (Kocourek and Simanova, 2018, p. 759).

2. Problem Formulation and Methodology

The aim of the paper is to identify the changes in commodity structure (trade in goods) of both trading partners, the EU and the RoK, after the formal ratification of the FTA agreement in 2015 and to assess whether our findings are in line with the conclusion made by Decreaux et al. (2010). Since the agreement was provisionally applied since 2011, we base our analysis of changes in the commodity structure on two years: 2010 as a year immediately preceding the provisional application of the agreement and 2017 as a year immediately succeeding the year of removal of all duties with the exception of highly sensitive agricultural and fisheries products with longer transitional periods.

Introductory part of the paper presents the top economies in the world based on their PPP GDP. PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the USD has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (WDI, 2020). Data are in constant 2011 international dollars. We used the data for 2018, reliable data for 2019 were not sufficient.

For the analysis of trade in goods before and after the FTA was signed, we use data provided by ITC (2020). We use Harmonized Commodity Description and Coding Systems (HS). The HS was introduced in 1988 and has been adopted by most of the countries worldwide. It has undergone several changes in the classification of products. In this paper, we use HS Revision 2007 (UN Trade Statistics, 2017) if not specified. The HS is an international nomenclature for the classification of products. It allows countries to classify traded goods on a common basis for customs purposes. At the international level, the HS for classifying goods is a six-digit code system. The HS comprises approximately 5,300 article/product descriptions that appear as headings and subheadings, arranged in 99 chapters, grouped in 21 sections (5,000 product descriptions and 97 chapters for HS Revision 2007). The six digits can be broken down into three parts. The first two digits (HS-2) identify the chapter the goods are classified in. The next two digits (HS-4) identify headings within that chapter. The next two digits (HS-6,

subheading) are even more specific. Up to the HS-6-digit level, all countries classify products in the same way (a few exceptions exist where some countries apply old versions of the HS) (UN Trade Statistics, 2017). We note using only direct data from the ITC database (ITC, 2020), which may cause some discrepancies in the values of exports and imports. We decided not to use the mirror data because of their several shortcomings, namely: 1. Mirror data does not cover trade with non-reporting countries; 2. The transshipment issue can hide the true origin of goods; 3. Mirror data invert the reporting standards by valuing exports in CIF terms (i.e. including transportation and insurance costs) and imports in FOB terms (i.e. excluding these services); 4. The number of reporting countries may be different from one year to another. Hence comparisons over time using mirror data need to be interpreted with caution (ITC, 2020).

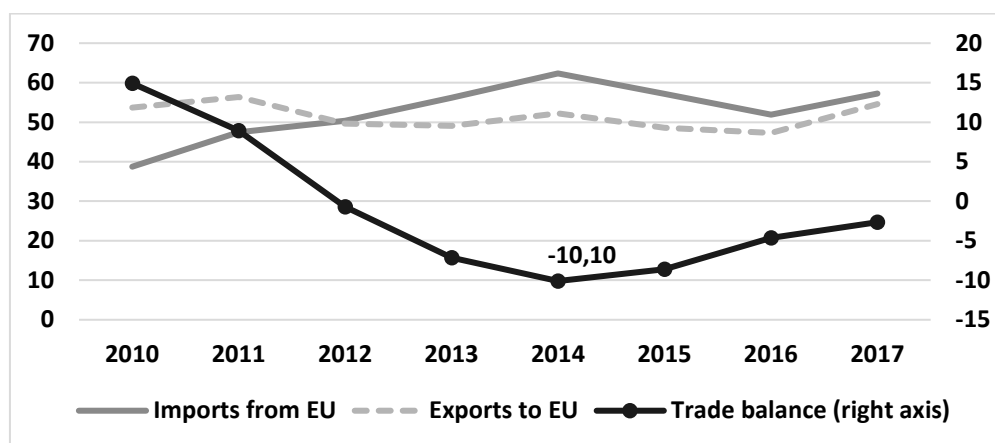
3. Analysis of Mutual Trade in Goods Between the EU and the RoK

This part of the paper presents the results of the analysis of mutual trade in goods between the EU and the RoK from the point of view of flows from and to the RoK. We analyse export and import flows in general during the observed period 2010-2017 together with trade balance. In the second subsection of this part, we analyse the changes in the commodity structure of both export and import flows between 2010 and 2017.

3.1 Development of Mutual Trade

The EU is one of the most important trading partners of the RoK as documented in figure 1 which presents the development of Korean exports and imports to and from the EU during the period between 2010-2017 with overall trade balance. Regarding the latest figures, in 2018, the EU ranked third (after China and the United States) in Korean exports with 9.55% share and overall value of Korean exports at 57.78 billion USD. Even more prominent role may be seen in Korean imports, where the EU ranked second in 2018 (after China) with a share of 11.64% and value of 62.28 billion USD.

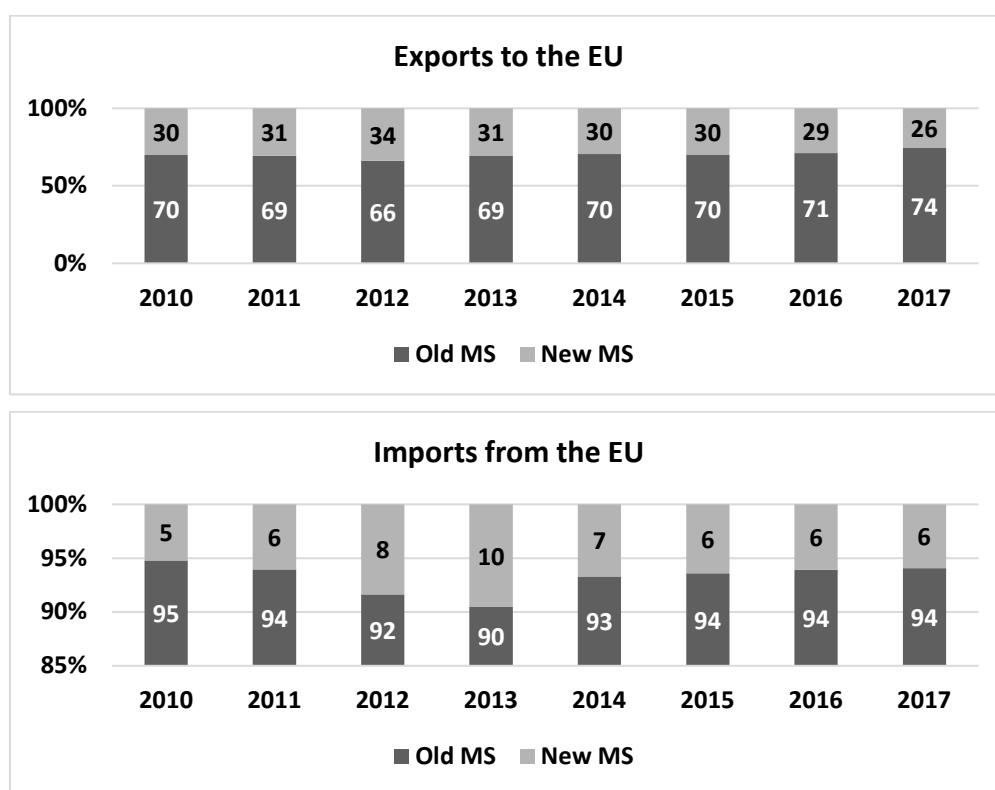
Figure 1: RoK Exports, Imports and Trade Balance, Billion USD



Source: own elaboration based on ITC (2020).

Looking at the development of exports and imports in the observed period, we note that in the beginning of the second decade of the 21st century, exports to the EU were higher than imports from the EU. However, a significant change occurred in 2012 when the imports from the EU for the first time since 2001 outperformed the exports to the EU by 71.7 million USD and were higher since then until 2017, reaching a trade deficit with the EU of 2.66 billion USD in 2017. Looking at the figure 1, we note that Korean exports and imports to and from the EU were developing in a quite similar way after 2012 with increased values of both. However, we note much higher rate of increase in imports than exports. While value of exports to the EU between 2012 and 2014 increased annually by 2.6%, the value of imports from the EU recorded much higher increase of 11.2%. Since 2014, the dynamics of exports and imports more or less copied the same path with the decrease in the value of both in 2015 and 2016 and the increase in 2017 with higher values of imports then exports leading to a deficit in trade between the RoK and the EU despite the fact that in 2015 and 2016 the decrease in the value of imports from the EU, caused by slowing down of the EU economies, was much higher than in exports to the EU.

Figure 2: RoK Exports and Imports to Old and New EU Member States, %



Source: own elaboration based on ITC (2020).

Important aspect of mutual trade in goods is trade between the RoK and old (those joining the EU before 2004) and new EU member states (those joining the EU in and after 2004). Figure 2 presents shares of old and new member states on overall Korean exports and imports to the EU. Based on the data provided by figure 2, we note rather stable development in the second decade of the 21st century regarding both exports and imports with asymmetrical shares of old

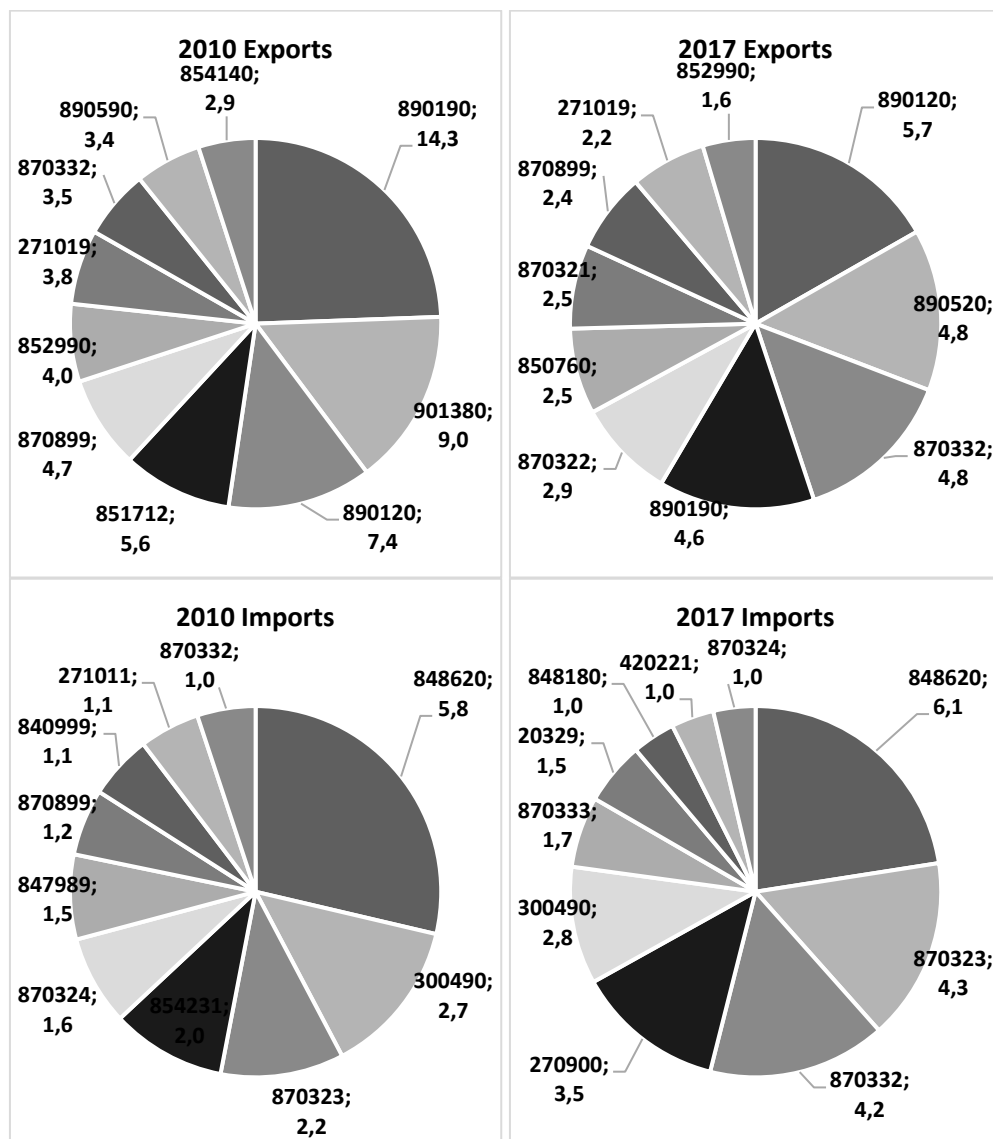
and new member states. In Korean exports, old member states comprised approximately 70% share and new member states approximately 30%. In Korean imports from the EU, share of old member states was much higher at approximately 94%, while the share of new member states comprised only 6% (except for years 2017 in exports and 2013 in imports).

3.2 Changes in the Commodity Structure

In this part of the paper, we present the analysis of top commodities in Korean exports and imports to and from the EU based on the HS-6 digit level of the HS Code classification (UN Trade Statistics, 2017) using the ITC database (ITC, 2020). As proposed, we try to identify the changes that may be induced by signing the FTA between the two partners, thus comparing years 2010 and 2017.

Regarding exports from the RoK, based on figure 3 we note some significant changes in both exports and imports. Firstly, in exports, there was a significant change in the share of top ten exported products during the observed years. While in 2010, the share amounted to 58.5%, it decreased substantially to 34% in 2017 leading to assumption of rather high concentration of Korean exports before the FTA was signed with vessels for the transport of persons and goods (subheading 890190) reaching 14.3% share of total Korean exports in 2010 and with tankers (subheading 890120) composing only 5.7% of total Korean exports in 2017. Different situation was recorded in Korean imports. While in 2010 top ten imported products reached 20.2%, this share increased to 27% in 2017 with machines and apparatus for the manufacture of semiconductor devices or of electronic integrated circuits (subheading 848620) being the most imported commodity to the RoK with a share of 5.8% and 6.1% respectively. This leads us to assumption of relative increase in the concentration of Korean imports after the FTA was signed, even though the concentration of imports was much lower than concentration of exports suggesting much higher diversification of the EU imports to the RoK probably caused by the size of the economies with the EU economy being much larger than Korean economy.

Looking at the changes in the commodity structure of Korean exports and imports before the signing of the FTA and after full implementation, we note following. In exports, in 2010, half of the most exported products belonged to section 17 (Vehicles, aircraft, vessels and associated transport equipment), followed by three products in section 16 (Machinery, mechanical appliances, electrical equipment) and one product from sections 18 (Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus) and 5 (Mineral products). Despite the decline in the share of top ten exported products in 2017 compared to 2010, the concentration of exports from the RoK increased with only products from three sections (17 (seven products), 16 (two products) and 5 (one product)). Regarding imports, the most imported products in 2010 came from sections 16 (four products from chapters 84-85;) and 17 followed by sections 5 and 6 (Products of the chemical or allied industries) with one product each (see figure 3). However, there was rather significant change between 2010 and 2017 with section 17 being the most important section in 2017 with four products, followed by section 16 with two products. There was one product imported from each of sections 1 (Live animals; animal products), 5, 6 and 8 (Raw hides and skins, leather, fur skins and articles thereof) in 2017.

Figure 3: RoK's Most Exported and Imported Commodities, HS-6-digit level, %

Source: own elaboration based on ITC (2020).

4. Conclusion

We conclude rather significant change in Korean export/import flows in favour of imports since 2012 leading to trade deficit of the RoK with the EU since 2012. Decomposing the EU to two main groups, old and new member states, we conclude rather asymmetrical trade relations with both groups in exports as well as in imports. While the exports from the RoK to the EU in 2017 were in favour of old member states (74% share), in imports, the share of old member states was even higher at 94%. Looking at the evolution of trade relations of the RoK

with these two groups we conclude almost no change in Korean exports and imports during the observed period (with few exceptions like years 2012 and 2013).

If we compare our findings with the suggestions of Decreaux et al. (2010), we note the similarity between them. In 2017, the RoK exported much of its value in cars (chapter 87) and other transport equipment (chapter 89) as suggested by Decreaux et al. (2010). Similar to exports, looking at the imports we note that the most important commodities include products from chapters 87, 30 (pharmaceutical products), 2 (meat and edible meat offal) and 84.

Regarding the dynamics of exports and imports from the point of view of the FTA between the EU and the RoK, we may conclude that the agreement benefited the EU more than it benefited the RoK. From 2011 to 2017, the average annual growth in exports to the EU was 0.61%. However, imports from the EU from 2011 to 2017 recorded an annual average growth of 6.28%.

Limitations of our research include mainly the fact that we analysed the mutual trade relations in goods between the EU and the RoK and did not include services which are the part of world economy that is dynamically developing and evolving especially in the developed economies of which both economies are parts.

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Is Ground Water Subject to Free Trade under the Free Movement of Goods?

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Abstract

In December 2015 the European Commission initiated an infringement procedure against Slovakia for banning water exports in its constitution as it believes that the corresponding provisions constitute a barrier to the free movement of goods within the EU's internal market. Prior to adopting the contested constitutional amendment, a Polish company tried to transport Slovak water through underground pipelines to Poland, where it would be bottled and sold. However, the Slovak authorities in charge refused to grant the water extraction permit to the Polish company concerned in order to keep water within the national territory where it serves the purpose of meeting the public security of providing water to households and businesses alike. The aim of the paper is to examine the legal status of water under International Law as well as under EU Law and to predict the possible outcome of the infringement procedure.

Keywords: ban on water exports, EU's internal market, European Commission, infringement procedure, national security

JEL Classification: K23, K33, K41

1. Introduction

The internal market of the European Union is based on the free movement of persons, goods, services and capital. Restrictions on the free movement of goods are possible under primary EU law only if they are justified by *i.a.* “public morality, public policy or public security; the protection of health and life of humans, animals or plants” (TFEU, 2012, Article 36). The Treaty on the Functioning of the European Union at the same time recalls that these restrictions must not constitute a barrier to trade between EU Member States. What conditions need to be met under EU law, to make sure that an export ban does not constitute an obstacle to the implementation of one of the four freedoms guaranteed by EU law, in this case, the free movement of goods, namely trade in drinking water? The aim of this paper is to explore whether Slovakia is indeed in breach of EU law, a fact that the European Commission is inclined to believe. In terms of methodology, the paper shall first look at the facts of the case, move on to the analysis of the applicable legal framework and conclude with a prediction of how the current dispute between Slovakia and Poland will end.

As to the fact of the case, a Polish company intended to pump water from Slovakia to Poland by underground pipeline, where the water would be subsequently packaged and sold or exported. The Slovak authorities would definitely support a similar *bona fide* direct investment (Dolinová, 2018), *e.g.* building a factory for packing water within a Slovak territory and creating new jobs in that factory, however, they believed that the Polish business plan seemed rather controversial in terms of compliance with ethics and morality (Feber et Petrucijová,

2016), even though some lawyers may see it as an obstacle to the free movement of goods that should be ensured within the internal market of the European Union. This business plan, however, was frustrated when the Slovak authorities in charge declined to issue the corresponding water extraction permit and initiated a constitutional amendment, under which Slovak water may not be transported abroad by means of pipelines or water tanks, with some exceptions based on humanitarian reasons. The amended Article 4(2) of the Slovak Constitution (2014) now reads as follows:

"(2) The transport of water taken from water bodies situated in the territory of the Slovak Republic across the borders of the Slovak Republic by means of transport or by pipeline shall be prohibited; the prohibition does not apply to personal water consumption, drinking water packaged in consumer packaging in the territory of the Slovak Republic and natural mineral water packaged in consumer packaging in the territory of the Slovak Republic and to the provision of humanitarian and emergency assistance. Details of the conditions for the carriage of water for personal consumption and water for the provision of humanitarian and emergency assistance shall be laid down by law."

Following the frustration of this business plan connected with severe economic losses, the Polish company tried to recover damages for its expropriated investment under international investment law, which proved of no avail. Having exhausted the investment protection avenue, the Polish company concerned filed a complaint with the European Commission alleging a breach of the rules on the free movement of goods by Slovakia. The European Commission responded to this complaint by initiating infringement proceedings against the Slovak Republic, which is a common practice when there is a suspicion of a breach of the rules enshrined in EU law. The following subsections shall discuss why the recovery of the investment failed and how both International and EU Law protect the management of groundwater.

2. Failed Recovery of Expropriated Investment under EU Law

Publicly available sources show that the Polish company Muszynianka, which has an annual turnover of around one billion euros, has built a two-kilometer pipeline along the border river between Slovakia and Poland for EUR 3.7 million (Arpas, 2017). In order to obtain compensation for damages, the Polish company first sought to initiate arbitration proceedings against Slovakia based on a bilateral investment treaty between Poland and Slovakia, seeking a compensation of EUR 75 million (UNCTAD, 2019) for thwarting the investment of not issuing a permit to use water resources. However, the arbitration itself was burdened with a number of problems at the outset. Slovakia disputed the person designated by the plaintiff as an arbitrator because of his alleged bias. Subsequently, the nominated candidate for arbitrator appointed by the plaintiff resigned. The Court of Justice of the European Union caused yet another blow to the ongoing arbitration before the proceedings were concluded.

The Court of Justice of the European Union delivered its *Achmea* judgment in on 6 March 2018 (CJEU, 2018) stating that bilateral investment treaties concluded between EU Member States cannot be invoked in the EU internal market on the grounds that the EU internal market is a single market; *stricto sensu* is not possible to make foreign investments in this market. Thus, a company whose investment has been frustrated should avail itself of a judicial remedy, since the mutual recognition and enforcement of judgments delivered by the courts of one Member State in civil and commercial matters is guaranteed in all other EU Member States by the so called Brussels I Regulation recast. It is therefore clear that an action for damages would most likely fall within the material scope of the Brussels I Regulation recast. The Court of Justice of the European Union assumes that the Member States of the European Union have

such independent and qualified courts that their judges should be able to decide impartially on disputes in which the defendant is the State which pays their salaries.

Following the *Achmea* judgment delivered by the Court of Justice of the European Union, the Polish company withdrew the request to initiate arbitration because the arbitration award would not be enforceable in the European Union and the whole arbitration would therefore be meaningless, it would generate additional costs to the Polish company, which would be unproductive. Interestingly enough, the Court of Justice of the European Union calls on the Member States in its *Achmea* judgment not to pay retroactively the compensation to which they should be obliged under arbitration awards based on intra-Union bilateral investment treaties, prompting EU Member States to breach their obligations under International Law. What are the EU's obligations under International Law when it comes to the protection of water shall be discussed below.

3. Protection of Water under International Law

The EU is a community of law which means that EU undertakes to follow the rules of international law similarly to its Member States whose political systems are based on the rule of law. Whereas binding sources of public international law deal mainly with international watercourses (Kuokkanen, 2017), soft law instruments and declarations prompt governments to manage water wisely, efficiently and in a sustainable way. This is also the case of some of the United Nations sustainable development goals (SDGs) where water occupies a prominent position, especially SDG 6 labelled as "Ensuring availability and sustainable management of water and sanitation for all".

The protection of groundwater is of paramount importance in terms of meeting the SDG 6 as groundwater constitutes between 98 per cent and 99 per cent of the world's available freshwater resources (Conti and Gupta, 2016). Looking at water as an object of international public law, it can thus be perceived as a natural resource constituting an irreplaceable raw material (Peráček et al., 2016). National states exercise their sovereignty over natural resources found within their territory under international public law. This rule has become a widely accepted principle of public international law recalled in a number of resolutions adopted by the United Nations (UN). To name the most prominent UN resolution, the United Nations' General Assembly adopted the declaration on permanent sovereignty over natural resources on 14 December 1962 (General Assembly Resolution 1803 (XVII)). Paragraph 7 of this UN Resolution reads as follows "violation of the rights of peoples and nations to sovereignty over their natural wealth and resources is contrary to the spirit and principles of the Charter of the United Nations and hinders the development of international co-operation and the maintenance of peace". Indeed, the Polish-Slovak dispute initiated by the European Commission as an infringement procedure is unlikely to improve the diplomatic relations between these two countries concerned.

4. Nature of the Infringement Procedure under EU Law

The aim of the infringement procedure is to make the EU Member State concerned to comply with EU law. Therefore, if the free movement of goods is impeded, the restriction in question should be removed by the infringing EU Member State (Craig and de Búrca, 2011). The infringement procedure is registered in the online database of the European Commission containing a complete list of infringement proceedings against individual EU Member States. The relevant database of the European Commission has assigned No. 20154225 to the procedure initiated against Slovakia (see the Appendix below). The European Commission sent a letter of formal notice to Slovakia under Article 258 of the Treaty on the Functioning of

the European Union concerning its ban on water exports. These proceedings appear to be pending in the European Commission's database, but the Commission has not moved the procedure to the next stage of the pre-judicial procedure or to the Court of Justice of the European Union. Based on information provided by the Slovak Ministry of the Environment which is in charge of Slovakia's defense in this case, a reply to the letter of formal notice was sent by Slovakia in April 2016. There have been no news on this procedure ever since. The European Commission is under no obligation to provide information about pending procedures in order not to compromise their outcomes, therefore, more up to date information could not be obtained. Yet, it is rather surprising for an infringement procedure to be "stuck" in its initial stages for many years without any specific information on how it has advanced. It is clearly a politically very sensitive topic.

Before submitting a case to the Court of Justice of the European Union, the Commission seeks to clarify the detailed circumstances of the case. During this pre-trial phase, the Commission may also close the proceedings and withdraw the action without referring the case to the Court of Justice of the European Union. In the context of pre-trial proceedings, the Member State is under an obligation to prepare a qualified defense of its conduct, that is to say, in the present case, the introduction of a constitutional ban on the export of water from the territory of the Slovak Republic by pipelines or tanks. As a qualified defense, Slovakia probably submitted that water is not an ordinary exportable product, but rather a strategic resource that is part of national wealth and as such deserves constitutional protection. In the light of the permitted restrictions on the free movement of goods, a justification on grounds of the protection of public health and / or public security seems more than appropriate. States usually have a legal obligation to ensure the supply of drinking water to their population. If the water is drained to a large extent by tanks or pipelines to a foreign country, the State concerned could not meet its legal duty to ensure the supply of drinking water to its population. It cannot be disputed that sufficient access to safe drinking water is a prerequisite for maintaining and preserving public health. Limiting water exports thus seems to be in line with the rules laid down in the Treaty of the Functioning of the European Union.

5. Conclusion

It is not clear why the European Commission believes that groundwater should be subject to free trade under the EU's internal market. This would be contrary to the current trends, both at international and EU level, which prompt the international community to dispose of precious water resources wisely and efficiently to be able to secure sufficient water supplies to households.

Apart from the SDG 6 adopted at international level and mentioned above, there was also a European Citizens' Initiative at EU level, which seeks to enshrine the right of EU citizens to affordable and quality drinking water. Also, EU legislation, particularly the EU Water Framework Directive adopted back in 2000, calls on EU Member States to provide for a sustainable water use through the long-term protection of available water resources (Green *et al.*, 2013). This is precisely, what Slovakia has been doing. The author believes that Slovakia's efforts to protect drinking water exports at constitutional level do not constitute a restriction on the free movement of goods, but rather constitute a measure duly justified by the need to safeguard the public interest in the supply of drinking water to the population. This is necessary to maintain public health and public security of that state. The author believes, that any legal interpretation the contrary, would cause Slovakia to breach its obligation under the EU Water Framework Directive. It is therefore likely that the European Commission will eventually withdraw its action against Slovakia, but the new Commissioner in charge of the internal market under Ursula von der Leyen's leadership still needs some time to get acquainted with

the ongoing files which were opened under the former Junker's presidency of the European Commission. It remains to be seen whether other EU Member States will follow Slovakia in terms of amending their constitutions in order to incorporate a constitutional protection of water exports.

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Appendix

Table 1: Entry of the Infringement Procedure against Slovakia in the European Commission's List of Active Infringement Cases

Infringement Number	Decision Date	Decision Type	Member State	Policy Area	Title	Active Infringement Cases	Non-communication Cases
20154225	10/12/2015	Formal notice Art. 258 TFEU	Slovakia	Internal Market, Industry, Entrepreneurship, and SMEs	The rules concerning export of water	Yes	No

Source: European Commission (2020)

Legal, Accounting and Tax Approaches to Emission Allowances and Their Trading Within the European Union

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Abstract

This paper deals with a very topical and important issue of emission allowances not only in terms of their legal definition and development, but also in terms of the current situation in the EU. The paper also presents an analysis of different approaches to the accounting of emission allowances including tax perspective. The Czech Republic has long been involved in emission trading under the so-called European trading system (ETS), the task of which is primarily to reduce greenhouse gas emissions in order to prevent global climate change. The paper also presents amendments to ETS Directive 2003/87/EC under the fourth phase (2021-2030) with effect from 1 January 2021 which should help reduce emissions by 2030, in line with climate and energy policies and thereby achieve EU objectives in this area.

Keywords: accounting, European Union, emission allowances, harmonization

JEL Classification: H25, F60, K34, M40, M41, M48

1. Introduction

The Czech Republic joined the EU emission trading system (EU ETS) as early as 2005. The European trading system is based on the Kyoto Protocol and is primarily designed to reduce greenhouse gas emissions in order to prevent global climate change. The EU ETS operates in 31 countries of the European Economic Area (EEA). The government of each country distributes a certain number of emission allowances between businesses; allowances can be traded not only within the individual countries, but also within the whole European Union. In the Czech Republic, this issue is regulated by the Act No. 695/2004 Sb., On Conditions of Greenhouse Gas Emission Allowance Trading and on Amendments to Certain Acts which sets out the definition of emission allowances, conditions and deadlines governing greenhouse gas emission allowance trading. An emission allowance in the Czech Republic is defined by the above-mentioned Act as the property value corresponding to the right of the facility operator to release an equivalent of a ton of CO₂ into the air in the specified calendar year. The amount of allowances to be issued for the specified period and the amount of allowances for individual facility operators is determined and allocated by the Ministry of the Environment of the Czech Republic. In the past years, there was an excess of emission allowances in the Czech Republic. This enabled Czech companies to trade in emission allowances in order to obtain additional corporate financial resources. The sale can be realized on European energy exchanges through a specialized broker.

2. Problem Formulation and Methodology

In the paper, the exploration method was used, including description and classification; furthermore, methods of analysis and synthesis were chosen that match the paper's content and focus. A dialectical benefit, for which each phenomenon can be understood as a part of the whole, can be considered as a methodological basis. Individual economic categories and economic phenomena are not examined in isolation but are based on principles of integrity of economic phenomena and the principle of dialectical unity. Apart from the mentioned methods, the method of procedure was used, which comes from simple categories to their increasingly complex determination, to their mutual relations. The findings are summarized primarily using the method of synthesis and scientific explanation.

3. Current Development of Emission Allowance Prices

Reducing greenhouse gas emissions in the EU is one of the objectives of the European Council's climate and energy policy. This reduction should represent a reduction of at least 40% (compared to the development during 1990-2030). Since the EU ETS will be the main instrument to achieve this goal, a reform is needed to ensure a well-functioning system. As a first step in this reform, the European Union has recently taken a decision to create a market stability reserve for the EU ETS. The goal of this reserve is to remove the large surplus of emission allowances created in the EU ETS and make it more resilient to the imbalance between supply and demand (Evropská rada, Rada Evropské unie [online], 2019). In 2018 and 2019, emission allowance prices fluctuated between 25 and 26 EUR/tCO₂. The development of emission allowances prices during 2010-2018 is shown in Figure 1.

Figure 1: Development of Emission Allowance Prices in 2010-2018



Source: Budín [online] (2019).

According to the analysts, the last relatively sharp price increase in 2018 was also influenced by the political situation in relation to BREXIT, i.e. the withdrawal of the United Kingdom from the European Union without an agreement. The rise in emission allowance prices also occurs due to the date of surrender of allowances for the previous year (30 April) and the associated higher trading activity. The future price slump should be counteracted by the Market Stability Reserve (MSR), which was introduced on 1 January 2019. In total, the MSR is to reduce the volume of allowances in circulation by 24% per year between 2019 and 2023 (Budín [online], 2019).

The European Commission presented a major proposal which represented a broader revision of the EU ETS already in 2015. The aim of this proposal was to take into account the guidelines of the European Council on the role the EU ETS should play in achieving the EU greenhouse gas reduction target by 2030 and enact them. The proposed changes also aimed to promote innovation and the use of low-carbon technologies, while contributing to the creation of new opportunities for jobs and growth and at the same time maintaining the necessary guarantees to protect the competitiveness of industry in Europe. The proposal for revising the EU ETS Directive to enhance cost-effective emission reductions and investments in low-carbon technologies – 2015/148 (COD). To achieve the EU target of reducing emissions by at least 40% by 2030, sectors covered by the EU ETS will have to reduce their emissions by 43% compared to 2005. This means that the total number of emission allowances will fall faster than before: from 2021 by 2.2% per year instead of 1.74%. This corresponds to a further emission reduction of around 556 million tonnes between 2020 and 2030 which is approximately equal to the annual volume of emissions in the United Kingdom. The proposal included, among other things, the following changes:

- a revision of the free allocation scheme focusing on the sectors most at risk of relocating production to non-EU countries (this affects around 50 sectors),
- a significant number of free allowances reserved for new and expanding facilities,
- more flexible regulations to better align the quantity of free-of-charge allowances with production data,
- updating all benchmarks used to measure emissions to reflect technological progress (Senát [online], 2018).

According to the proposal of the European Commission between the years 2021 and 2030, commercial corporations should be allocated free of charge approximately 6.3 billion allowances in the total value of 160 billion EUR. The Commission also proposes to set up a number of support mechanisms to help industry and energy to cope with the challenges of innovation and investment associated with the transition to a low-carbon economy. As the proposal states, the support mechanisms also include, for example, the creation of two new funds – the Innovation Fund and the Modernization Fund. These funds primarily extend existing support for demonstration of innovative technologies to breakthrough innovations in industry and also facilitate investment in the modernization of the energy sector and wider energy systems and enhance energy efficiency in ten lower-income member states. (Senát [online], 2018).

4. Legal, Accounting and Tax Aspects of Emission Allowances

As stated above, according to Act No. 695/2004 Sb., an allowance is a property value corresponding to the right of the facility operator to release into the atmosphere in the specified calendar year the equivalent of a ton of CO₂. The Ministry of the Environment of the Czech Republic determines the amount of allowances that will be issued in the specified period and

allocates them to individual facility operators. The operator can buy and sell allowances or transfer them to other persons. The transfer of the allowance takes place when it is credited to the transferee's account in the register. Allowances cannot be subject to a lien or a contribution to the registered capital of a company (Kolektiv autorů, 2019).

For each trading period, no later than one month before its commencement, the registry administrator issues allowances in the quantity set for the respective trading period by the national allocation plan. The legal framework for emission allowances is also supplemented by the Act No. 212/2006 Sb., amending Act No. 695/2004 Sb., On conditions of Greenhouse Gas Emission Allowance Trading and Amending Certain Acts, the Act No. 86/2002 Sb. On Air Protection and Amending Certain Other Acts, as amended, and the Act No. 455/1991 Sb., On Trade Licensing (Trade Licensing Act), as amended. Last but not least, emission allowances are related to the Act No. 383/2012 Sb., On Conditions for Trading in Greenhouse Gas Emission Allowances, as amended. The legal nature of allowances varies from country to country, ranging from financial instruments and intangible assets to property rights and commodities. From the above follows that there is currently no uniform regulation of accounting practices in the area of allowance trading internationally. There is also no uniform concept of emission allowances in terms of property value. Allowances may be accounted for as a type of intangible asset, as a financial instrument, or as a form of inventory, while the inclusion of allowances in items of assets is closely related to other accounting issues such as accounting for the decrease in allowances, depreciation or provisioning (Tušan, 2014).

From the accounting point of view under the Czech legislation, emission allowances are considered as intangible fixed assets. These include greenhouse gas emission allowances, aviation emission allowances, emission reduction and verified emission reduction units from project activities, and quantity allocation units, all regardless of their valuation. As for the financial reporting, allowances are recognized in the balance sheet in item B.I.4. Other intangible fixed assets (Hakalová, Palochová, Tušan, 2016) as shown in Table 1.

Table 1: Emission Allowances in the Balance Sheet under Czech Legislation

Designation a	ASSETS b	Line number C	Current accounting period			Prior accounting period
			Gross 1	Adjustment 2	Net 3	Net 4
B.I.4.	Other intangible fixed assets	10				

Source: Notes No. 1, Decree No. 500/2002 Sb.

Emission allowances are valued in the accounting at the replacement cost when acquired free of charge or at the purchase price in case of purchased emission allowances. In the event of first free-of-charge acquisition of allowances, exchange-traded allowances may be used as the reference price. In accordance with Czech accounting regulations, emission allowances are not considered to be a financial instrument, but they can become one figuratively in the form of financial market derivatives.

Allowances, although included in intangible assets, cannot be amortized both using accounting or tax amortization because emission allowances are not considered intangible assets for income tax purposes. Unlike emission allowances, for example, preferential limits are depreciated intangible fixed assets based on criterion, time or performance.

The first free-of-charge acquisition of allowances is accounted for in the same way as grants, i.e. to the debit side of the relevant account in the account class 01 - Intangible fixed assets with the corresponding entry to the account in the account class 34 - Taxes and subsidies - receivable and payable. Consumption or sale of allowances is recognized in the expense and revenue accounts. An entry to the expense account is recognised with a corresponding entry in assets. An entry to the revenue account is recognised with a corresponding entry for the reduction in the subsidy liability. Consumption or surrender of allowances for the first acquirer has a neutral effect on profit or loss and the tax base. The procedure for accounting allowances is shown in Table 2.

Table 2: Procedure for Accounting Allowances under Czech Legislation

Document	Accounting event description	DR	CR
Internal document	Free-of-charge acquisition of allowances	01 - Intangible fixed assets	34 - Taxes and subsidies - receivable and payable
Internal document	Partial consumption of allowances	54 - Other operating expenses	01 - Intangible fixed assets
Internal document	Recognition of a subsidy in accounts	34 - Taxes and subsidies - receivable and payable	64 - Other operating revenues

Source: own processing, Decree No. 500/2002 Sb.

The acquisition cost is always a tax-deductible expense, but in case of trading in emission allowances only up to the amount of sales income. By 30 April, each facility operator is obliged to exclude the quantity of allowances corresponding to the amount of emissions in the previous calendar year from trading. At the moment of exclusion, allowances cease to be tradeable. Emission allowances are governed by the Act No. 383/2012 Sb., On Conditions for Trading in Greenhouse Gas Emission Allowances, as amended. In the event of a decrease in allowances, FIFO method is used, so it is important to track individual allowance purchases in the relevant analytical accounts.

If the emissions exceed the amount for which the company has allowances, it is necessary to create estimated liabilities, or according to some opinions, a provision for the purchase of additional allowances (Hanková [online], 2009). An accounting entity may also create a provision if it anticipates an increased need for emission allowances in the next period. The procedure for accounting provisions is shown in Table 3.

Table 3: Procedure for Accounting the Creation of Provisions for Emissions under Czech Legislation

Document	Accounting event description	DR	CR
Internal document	Provisioning for missing allowances - the allocated allowances do not cover the emissions released	55 - Depreciation, reserves, complex deferred expenses and adjustments relating to operating activities	45 - Reserves
Internal document	Purchase of allowances on the public market	01 - Intangible fixed assets	37 - Other receivables and payables
Internal document	Surrender of purchased allowances	54 - Other operating expenses	01 - Intangible fixed assets
Internal document	Cancellation of the provision	45 - Reserves	55 - Depreciation, reserves, complex deferred expenses and adjustments relating to operating activities
Current account statement	Payment for acquired allowances	37 - Other receivables and payables	22 - Bank accounts (cash at bank)

Source: own processing, Decree No. 500/2002 Sb.

However, the creation of an accounting provision for the purchase of additional allowances will not be a tax-deductible expense pursuant to Act No. 586/1992 Sb., On Income Taxes (hereafter only the VAT Act). Similarly to other components of assets, adjusting entries are created for allowances if the market price is lower than the price stated in the accounting. From a tax point of view, these will be tax non-deductible costs. When emission allowances are transferred between related parties, the question of the correct valuation of allowances arises. The price of the emission allowances sold in such a trade should correspond to the market price. Even for indirect taxes, i.e. in the area of VAT, there is no uniform legislation; most EU countries are subject to the Directive 2006/112/EC Article 56 when applying VAT in the context of trading in emission allowances. This means that emission trading is seen as a service. The place of supply is generally determined at the registered office or place of business; in case of trading between EU member states, the place of supply is determined on the reverse charge principle. The respective national arrangements of member states for trading in allowances may vary from one country to another in a particular situation. According to the opinion of the Ministry of Finance of the Czech Republic, trading in emission allowances in the Czech Republic is governed by the provisions of the above-mentioned directive. The trading in allowances is understood as a transfer of a right, i.e. the right to release a given amount of greenhouse gases into the air. In terms of VAT, it is a supply of services and as such is subject to value added tax at the standard rate. The place of supply is determined in accordance with Sec. 10 of the VAT Act, so the place of supply will always be the registered office or place of business of the service recipient (Hanková [online], 2009). Similarly to the accounting, there is no uniform legislation in the area of taxation. Individual member states differ from each other in the regulation of applying costs of sale, creation of provisions and

amortization, or the tax deductibility of sanctions for exceeding emission limits (Hakalová, Palochová, Pšenková, Bieliková, 2018). The view of accounting and reporting from the perspective of International Financial Reporting Standards (hereafter only IFRS) is also interesting. As for IFRS, it is especially IAS 38 that deals with intangible assets. Under IFRS, intangible assets are considered to be non-monetary assets that have no physical substance. Allowances are treated as intangible assets accounted for under IAS 38 (Hakalová, Pšenková, Losová, 2014). In June 2005, IFRIC 3 - Emission Rights was withdrawn by the International Accounting Standards Board on the recommendation of the European Financial Reporting Advisory Group. The Interpretation defined allowances as intangible assets that are acquired through a grant. IFRIC 3 was intended to explain how to apply existing IFRS to the so-called "cap and trade" model dealing with emission rights. IFRIC 3 caused undesirable mismatches with the simultaneous application of IAS 38 - Intangible Assets and IAS 37 - Provisions, Contingent Liabilities and Contingent Assets, namely mismatches in the measurement of assets and liabilities that are recognized as a result of the application of IFRIC 3 and inappropriate distribution of profits and losses. For these reasons, IFRIC 3 - Emission Rights was abolished without any replacement. The issue of greenhouse gas emission allowances is currently not addressed by IAS/IFRS. At the present, there is no IFRS procedure which would be somehow preferred (Langr [online], 2006).

5. Conclusion

This paper deals with a very topical and important issue of emission allowances not only in terms of their legal definition and development, but also in terms of the current situation in the EU. The legal framework defining emission allowances is very broad. It covers both emission trading as well as their accounting and reporting. The last legal impact can be seen in the area of taxation. Although there is still perceived a lack of harmonization in the legal field, it can be said that an advanced and well-functioning market for emission allowances has developed over recent years which is also reflected in the significant increase in emission allowance prices in recent years. Accounting for emission allowances differs according to Czech legislation in comparison with the international perspective, and harmonization and definition under IFRS in this area is still an open topic as this issue is currently not uniformly regulated under IFRS. The revoked interpretation of IFRIC 3 - Emission Rights was applied to allowances, but IFRS does not set clear rules for accounting for emission allowances at the present time. There is also no uniform concept of emission allowances in terms of property value. Allowances may be recognized in the accounts as intangible assets, short-term financial assets or inventories which is rather confusing. As for financial reporting, companies are obliged to include more accurate information on the method of reporting emission allowances with detail comments especially in the notes to the financial statements. Emission allowances are one of the tools to regulate air pollution, and they are a tool to reduce greenhouse gases. Other instruments of regulation include taxes that should penalize activities causing pollution. These taxes include so-called environmental taxes (Dyduch, Stabryla-Chudzio, 2019). In line with the conditions of the Czech Republic's membership in the European Union, the Czech Republic was obliged to introduce a tax on electricity, natural gas and solid fuels as of 1 January 2008. The carbon tax prepared by the government will cover heating with coal and natural gas and will constitute an additional income to the state budget. These funds could be used, for example, to support the development of renewable resources. The deadline for processing the draft of the carbon tax in the Czech Republic was set by Government Resolution No. 702/2011 until 31 December 2012, with effect from 1 January 2014. However, the Czech government has not yet succeeded in enforcing the carbon tax. Although this tax is not yet

mandatory, it has already been introduced by several European countries. It can be so predicted that the introduction of a carbon tax will be mandatory for EU member states.

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Role of Sport Policy in the European Union

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Abstract

Sport is a socio-economic phenomenon that contributes to the fulfilment of strategic goals with regard to solidarity and prosperity, defined by the European Union. Given the diversity and complexity of European sport structures, a single European model of sport can not be defined. The paper aims to evaluate sport policy and sport financing in the EU with a focus on public expenditures and sporting and recreational services. In particular, general government expenditures on recreational and sporting services in the EU countries in the period 2010-2017 are analysed. Correlation analysis is used to test mutual relationships of general government expenditures on sporting and recreational services with selected socio-economic indicators. The results have confirmed a weak correlation between the allocated public expenditures on sporting and recreational services and the socio-economic indicators. In contrast, a strong correlation was found between the employment in sport and human development index or GDP per capita.

Keywords: European Union, public expenditure, sport, sport policy

JEL Classification: Z20, H50, H72

1. Introduction

Sport is a socio-economic phenomenon of an increasing significance and contributes to the fulfilment of strategic targets of solidarity and prosperity, which are defined by the European Union, and it significantly strengthens economic and social cohesion. The main aim of the European Commission is to provide strategic orientation in relation with the role of sport in Europe and to incite debate about specific matters. In the process of the creation of EU policies, it is attempted to make sport more visible and to make the public more aware of the needs and specifics of this area (European Commission, 2007). From the economic perspective, sport is a dynamic, fast growing area with a macro-economic reach which can contribute to the fulfilment of EU targets and the growth and generation of jobs. Sport falls under the *acquis communautaire*, and European policies have a marked and increasing effect on sport in many areas (education, public health, social integration, environment, employment). Many authors (Houlihan, 1997; Böhm, 2013; Geeraert, 2016; Yilmaz, 2018) researched the interconnection between public policies and sports. They acknowledge that sport participation is considered as a way to achieve certain goals of public policy in the field of integration, health and education and sport has become more affected by and involved in public policymaking. Other authors, e.g. Melecký and Staničková (2014), apply regional approach to assess public policies in EU countries. Sport policy is also connected to solving current issues, such as doping or corruption. Linhartová and Volejníková (2015) deal with corruption in the European context. The contribution focuses on the role and position of sport policy in the EU, types of national

sport systems and possibilities of financing sport. The paper aims to evaluate sport policy and sport financing in the EU with a focus on public expenditures and sporting and recreational services.

1.1 Sport Policy in the European Union

The rising role of sport can be observed in European policies over the past 10 years. It is visible in the official documents, strategies, guidelines and recommendations. Many EU countries support the economic aspects of sport, especially the sustainable financing of sporting activities for all and the elaboration of policies based on concrete elements, perception of sport as public interest or support of the youth in doing sport through reforms. Some authors, e.g.; Böhm (2013); Garcia et al. (2018); Yilmaz (2018) provide a comprehensive analysis of the EU's involvement in sport and structure the key themes of the EU in the field of sport (sport in society, the economic dimension of sport and the organisation of sport). Four types of sports policy systems can be distinguished in the European Union, with a varying degree of subsidiarity, centralisation or decentralisation and the role of the individual sectors and the public sector in sport (Henry, 2009). The types of sports policy systems in the EU and their characteristics are provided in Table 1.

Table 1: Types of National Sports Policy Systems in the EU

Sports system	Characteristic of systems	Representatives
Bureaucratic configuration	- State sector; Centralisation and public sector as driver for delivering government specified requirements; Emphasis on Subsidiarity low.	BE, CY, CZ, EE, FI, FR, HU, LV, LI, MT, PL, PT, SK, ES, EL
Entrepreneurial configuration	- Private sector; Centralisation and public sector as driver for delivering government specified requirements; Selective Subsidiarity.	IE, UK
Missionary configuration	- Voluntary sector; Decentralisation and public sector as partner in achieving change; Emphasis on Subsidiarity high	AT, DK, DE, IT, LU, SE
Social configuration	- Social actors; Decentralisation and public sector as partner in achieving change; Compromised Subsidiarity	NL

Source: Authors according to Henry (2009)

On account of the diversity and complexity of European sport structures, it is impossible to define a single European model of organising or financing sport. The specific nature of can be viewed from two angles: as specificity of sports activities and rules, and specificity of sports structures (European Commission, 2007). However, the autonomy of sport organisations is the main feature of the “European Sport Model” and the impact of EU decisions in the field of sport (Henry, 2009; Agafonova, 2019). Other authors e.g. Petry et al. (2004) provide an overview of the similarities and differences in the sport systems in the European countries and the role of the different levels of responsibility of the state and the aspects of the financial support.

2. Data and Methodology

In the present research, papers and other documents dealing with sports policy in the EU have been used. Also, an analytical approach focused on comparison and correlation analysis has been applied. The analysis of sports indicators and other socio-economic indicators utilised

data from the Eurostat statistic database – Annual government finance statistics; Population and social conditions; Sustainable development indicators (Eurostat, 2019) and the World Bank - data from Human development reports (World Bank, 2019). The selected set comprises 28 EU countries: Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (EL), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK). The analysis focuses on general government expenditures on sporting and recreational services, which are compared in years 2010, 2017 and as average of the period 2010-2017 (as % of GDP, as % of total general government expenditure in %).

Correlation analysis is applied on EU countries in the period 2013-2017 for the purpose of testing mutual relations between general government expenditures on recreational and sporting services-GGERSS and selected socio-economic indicators (TGGE-total general government expenditure as % of GDP; EMPLS-employment in sport as % of total employment; GDP per capita in PPS (GDP) and HDI – human development index on the other side. The correlation analysis aims to determine the intensity of the linear correlation between X and Y. Correlation analysis for the given type of data was calculated by applying the Pearson's correlation coefficient (r). It reaches values within the range of $<-1, 1>$, when the sign indicates the direction of correlation (positive in direct and negative in indirect) and its absolute value the strength of linear correlation. The more the value reaches 1 or -1, the stronger the correlation. To express the strength of linear correlation, the coefficient of determination (r^2) was used the square root of the correlation coefficient (r) expressed in percent (Cohen et al., 2003).

3. Problem Solution

The economic dimension of sport is closely related to funding of sport. Sport and sports policies are funded by the individual EU countries according to their national priorities, not only from public resources (national, regional and local) but also non-public resources, such as sponsorship, households, member fees (EOC, 2011). The EU program Erasmus plus is designated to funding sport. Other sport related projects can be funded through programmes relating to other EU policies, such as youth, education, citizenship, health or regional policy (EOC, 2011). Public expenditures on sport and funding sport in the European context is dealt with by e.g. Böhm (2013) and Dallmeyer et al. (2017). Several models of funding sport can be distinguished in the EU countries which apply a different level of public funding per capita, share of volunteers, level of sport participation (measured by the membership rate or use of non-public resources (Eurostrategies, 2011). Based on the defined resources, four funding models of sport, plus two special examples are distinguished in the EU (Table 2a, 2b).

Table 2a: Models of Funding Sport in the EU

Sports model	Characteristic of Systems	Countries
Northern and Western European model	- High level of demand reflects social provision; - high participation rates, comparatively high levels of both private and public funding	AT, BE, DK, FI, DE, IE, LU, NL, SE + CY
Mediterranean model	- Lower level of public subsidy; private demand receives limited public support; the level of household spending per member is high compared with the public funding.	EL, IT, MT, ES

Source: Authors according to Eurostrategies (2011)

Table 2b: Models of Funding Sport in the EU

Sports model	Characteristic of Systems	Countries
Rainbow model	- Limited demand for leisure sports given low average incomes; public policies do not give priority to raising the level social demand for sport.	EE, HU, LV, LT, PT, RO, SK, SI
BCP model	-Social demand level, but with lower levels of household and public expenditures per capita	BG, CZ, PL
Special models	FR- the level of social demand and the total cost per capita are similar as countries (NWE) model; public sector contributes a much higher relative share of the cost, whereas households contribute less. UK- is limited state support and a lower level of supply; households pay a comparatively high share of the total cost; low level of public support leads to lower participation rates in countries (NWE) model.	FR, UK

Source: Authors according to Eurostrategies (2011)

Each model reflects different historical, institutional and cultural factors, as well as different level of economic development and regulatory Framework Member States.

3.1 Analysis of General Government Expenditures on Sporting and Recreational Services in EU Countries

This section provides a deeper analysis of public expenditures allocated to sport, which are in an international comparison a significant macro-economic indicator of the economic dimension of sport and expressed as % of GDP they indicate the size of the public sector. Comparison of general government expenditures on sporting and recreational services in EU countries as average of 2010-2017 shows that the highest volume of expenditures and recreational services as % of GDP was in France and Hungary, and the highest expenditures as % of total general government expenditures in the Netherlands and Hungary, followed by Estonia, Luxembourg or Sweden. The general government expenditures on sport in the EU28 is then around 0.4% of GDP and 0.7% of total general government expenditure. Further renders the comparison of general government expenditures on sporting and recreational services in EU countries expressed in years 2010 and 2017 as % of GDP and as % of total general government expenditures (Table 3).

The highest general government expenditures on sporting and recreational services in EU countries in 2010 were found in Poland, Slovenia and the Netherlands. By contrast, the lowest general government expenditures in 2010 as % of GDP on sporting and recreational services were allocated by Bulgaria, Croatia and Malta (only 0.1%) and as percentage of total general government expenditure by Bulgaria, Ireland, Greece or Lithuania (0.3-0.4%). In 2017, the lowest general government expenditures on sporting and recreational services were found in Ireland, Croatia, Malta and Slovakia. The highest general government expenditures on sport in 2017 were found mainly in Hungary (1.2% GDP and 2.5% of the total), followed by Estonia, France, the Netherlands, Luxembourg, Sweden, Finland. The biggest changes of general government expenditures on sporting and recreational services were found only in Hungary (increase by 0.8% GDP and increase by 1.8% of total general government expenditures) in 2017, compared to 2010. A weak increase in general government expenditures on sporting and recreational services as percentage of total general government expenditures (in 2017 compare 2010) is also seen in Greece, and a decrease in these expenditures is seen in Slovenia, Poland and United Kingdom. The results prove a different approach to funding sports from public resources and a small role of the public sector on the national level. Differences in funding

sport from public resources in EU countries are related to a number of factors (economic, political, social or demographic).

Table 3: Comparison of General Government Expenditures on Sporting and Recreational Services in EU Countries in Year 2010 and 2017

Country	2010		2017		Country	2010		2017	
	% of GDP	% of total	% of GDP	% of total		% of GDP	% of total	% of GDP	% of total
BE	0.4	0.8	0.4	0.7	LT	0.2	0.4	0.2	0.6
BG	0.1	0.3	0.2	0.6	LU	0.4	1.0	0.5	1.2
CZ	0.4	1.0	0.4	1.1	HU	0.4	0.7	1.2	2.5
DK	0.4	0.7	0.4	0.7	MT	0.1	0.3	0.1	0.4
DE	0.3	0.7	0.3	0.6	NL	0.6	1.3	0.5	1.1
EE	0.5	1.1	0.5	1.4	AT	0.3	0.6	0.3	0.6
IE	0.2	0.3	0.1	0.4	PL	0.6	1.4	0.4	0.9
EL	0.2	0.3	0.3	0.7	PT	0.4	0.8	0.3	0.7
ES	0.5	1.2	0.4	0.9	RO	0.3	0.9	0.3	0.8
FR	0.6	1.0	0.5	1.0	SI	0.6	1.3	0.3	0.7
HR	0.1	0.1	0.1	0.2	SK	0.2	0.5	0.1	0.4
IT	0.2	0.5	0.3	0.5	FI	0.5	0.9	0.5	0.9
CY	0.4	1.0	0.3	0.8	SE	0.5	1.0	0.5	1.1
LV	0.2	0.5	0.3	0.8	UK	0.4	0.8	0.2	0.4
EU28	0.4	0.8	0.3	0.7					

Source: Eurostat (2019) and authors' calculations

3.2 Relationships of General Government Expenditures on Sporting and Recreational Services and Other Indicators in EU Countries

Furthermore, the relation between general government expenditure on sporting and recreational services and selected indicators as average from the period 2013-2017 in the EU is tested by applying correlation analysis, Pearson's correlation coefficient (r) and the coefficient of determination (r^2). Correlation of the selected indicators is shown in Table 4.

Table 4: Correlation of Used Indicators in the EU as Average 2013- 2017

r	GGERSS	TGGE	EMPLS	GDP per capita	HDI
GGERSS	1	0.469* (0.219)	0.199 (0.0369)	0.196 (0.0384)	0.172 (0.029)
EMPLS	0.199	0.205 (0.042)	1	0.608**(0.369)	0.717**(0.514)

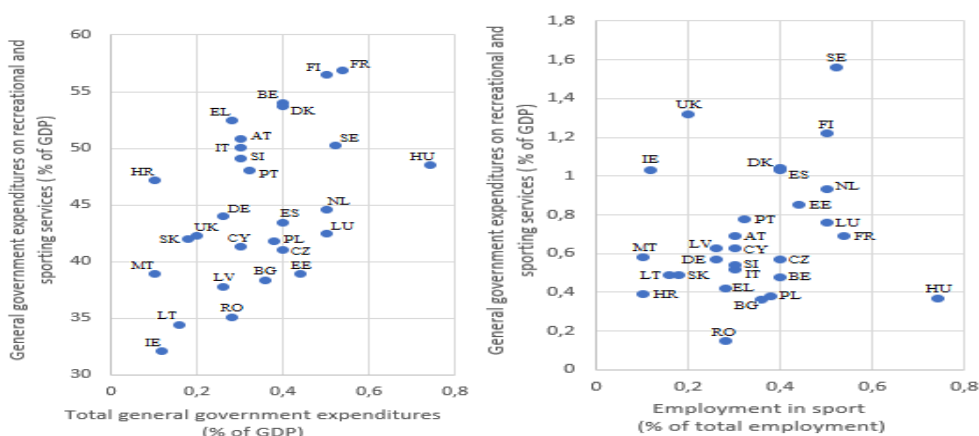
NOTE 1: * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed). NOTE 2: The data in brackets define the coefficient of determination (r^2).

Source: Authors' calculations

The relationship between general government expenditures on sporting and recreational services as % GDP and selected socio-economic indicators on the other side in the EU countries is seen in Figure 1 and 2. The results have proved only a weak correlation between government expenditures on sport on one side, and employment on sport; total general

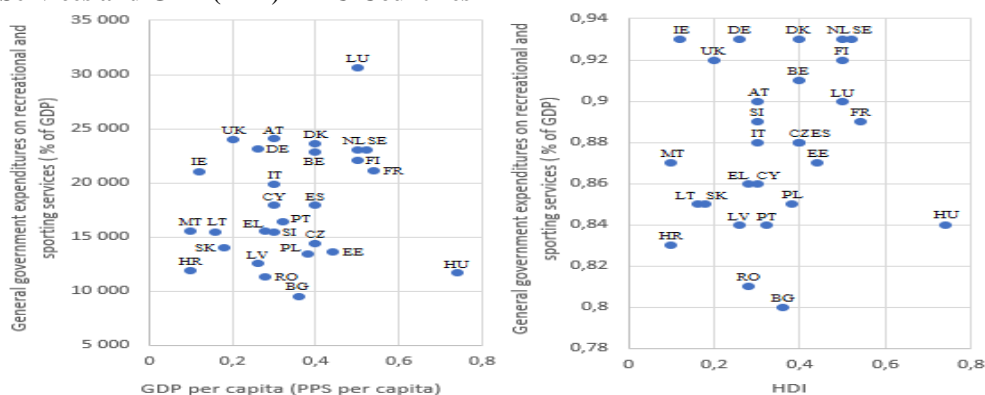
government expenditures; GDP per capita and HDI on the other. As the determination coefficient (r^2) shows, expenditures on sporting and recreational services are influenced from only 3% GDP per capita and HDI, and from 97% by other factors in the EU. Similarly, expenditures on sporting and recreational services are from 22% affected by TGGE, and more significantly (from 78%) by other factors (Table 4). A weak relation with other indicators can be explained by a relatively small share of expenditures on sporting and recreational services in the structure of general government expenditures by function. A more marked influence on HDI or GDP per capita can be assumed in other public expenditures, mainly on education, health care or social protection. As seen in EU research, a weak correlation was proved between government expenditure on sport and sport participation, however a large correlation was found between Gross National Income and government expenditure on sport (Böhm, 2013).

Figure 1: Relationship Between Expenditures on Sporting and Recreational Services and Total Government Expenditures and Employment in Sport in EU Countries



Source: Authors

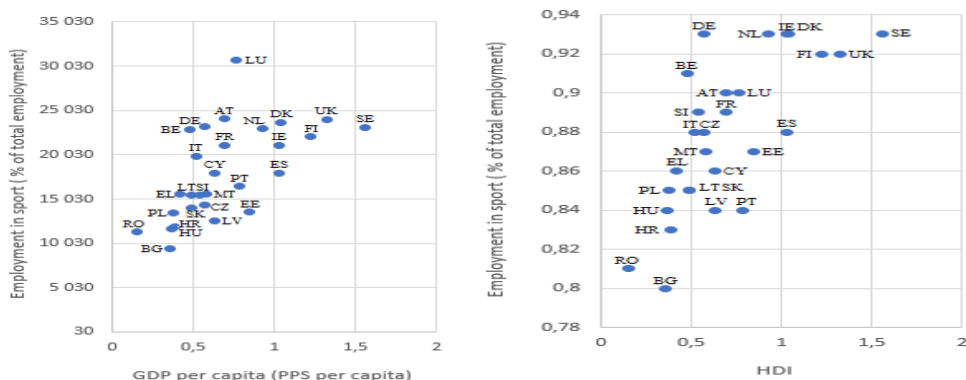
Figure 2: Relationship Between Public Expenditures on Sporting and Recreational Services and GDP (HDI) in EU Countries



Source: Authors

Furthermore, the relationship between employment on sport (as % of total employment) and GDP per capita (in PPS) and HDI on the other side (Table 4 and Figure 3) in the EU was evaluated. A strong, statistically significant relation was found, with the determination coefficient (r^2) indicating that the employment in sport is from 37% affected by the GDP per capita and from 63% by other factors. Similarly, the employment in sport is from 51.4% affected by HDI and from approximately 48.6% other factors affect it, such as sports participation, sports infrastructure, the share of volunteers. It can be assumed that the employment rate in sport will grow in line with the increasing offer of sport services.

Figure 3: Relationship Between Employment in Sport and GDP (HDI)



Source: Authors

4. Conclusion

Sport is an exclusive national competence of the EU member states, which is reflected in the diversity and specificity of sports structures and approaches to funding sport. The aim was to evaluate sport policy and sport financing in the EU with a focus on public expenditures and sporting and recreational services. The evaluation of sports policy showed that four types of sports policy systems are implemented in the EU, with a varying degree of subsidiarity, decentralisation and roles of the individual sectors and actors in sport. In the European context, several models of funding sport can be distinguished, which apply a different level of public funding per capita, sport participation, share of volunteers or use of non-public resources. The results of our analysis prove a different approach to funding sports from public resources and a small role of the public sector on the national level in EU countries. The results have also confirmed a weak relation between allocated public expenditures on sporting and recreational services and selected socio-economic indicators in the EU countries. In contrast, a strong correlation was found between employment in sport and HDI or GDP per capita. Research into sport was limited mainly by the unavailability of data at the European level. The following research will focus on the types of sport systems and financial support of sport in the EU countries.

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Analysis of Public Expenditures in the European Union in the Context of Public Policies

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Abstract

Public policies play a significant role in the lives of citizens in the whole EU and are closely associated with decisions about public funding. In the context of public policies, also public services have an important role. The article aims to evaluate public expenditures allocated to services, focusing on similarities and differences in the EU countries. Attention is paid to selected areas of public policies from the perspective of general government expenditures on services (COFOG second level) in the EU countries. The analysis is carried out for the period 2014-2017, applying the method of multidimensional scaling. Based on the similarity of the volume of public expenditures, the countries have been divided into eight clusters. Some groups of countries also demonstrate marked differences, in particular in the volume of public expenditures on transport and public health services. The results clearly show priorities of the EU countries in the specific areas of public policies.

Keywords: European Union, public expenditures, public policy, public services

JEL Classification: H40, H50, H59

1. Introduction

Public policies play a significant role in the lives of citizens in the EU countries. Public policies are closely related to the decision-making about public finances and its impact influences the range, structure and activity of the public sector (Euractiv, 2018). Public policies deal with not only the content of the policies but also the causes and reasons why the policies are created. These policies include areas ranging from environmental policy, security policy, transport policy and telecommunication policy to employment, housing, education, health or regional policy. Public policies across the EU can be observed from different perspectives: a) public policies through public finances, b) regional aspects of public policies, c) public policies and the role of public administration, or d) consequences of public policies for the public sector. Clifton and Diaz-Fuentes (2010) deal with the issue of public policy in the EU. The authors argue that prospects for EU policy on public services are considered from the perspectives of subsidiarity and proportionality policy, towards strengthening the common market is being increasingly uploaded to the supranational level in the form of directives, whilst cohesion and redistribution policies are being downloaded to the national level or dealt with at the supranational level by “soft” instruments. Selected topics of public policy in the European context are examined by, e.g. Drastichová (2016) in the context of environmental protection, Kašík and Slavata (2018) in the context of housing availability, and Melecký and Staničková (2014) use various approaches of evaluation in terms of regional policy.

The subject of the research is public policies from the viewpoint of public expenditures on services in the European context. In comparison with other research studies, the analysis of selected public expenditures (COFOG) is carried out, applying the method of multidimensional scaling. The paper aims to evaluate public expenditures allocated to selected services with an emphasis on similarities and differences in the EU countries.

1.1 Public Services in the European Context

Public policy is related to public interest. The meaning of the term “public service” is variable depending on the meaning of the term “public interest”. In the context of EU terminology, the term “public service” appears less accurate. It can relate to the fact that a service is offered to the general public and/or in the public interest, or it can be used for the activity of entities in public ownership (European Commission, 2011). Therefore, the EU uses the term public service obligations. According to European Commission (2003), Article 1, services of general interest are defined as services that aim to provide all citizens of their country the same opportunities, the freedom to live a life in line with their notion of satisfaction and the option to fully engage in a life within a society. According to European Commission (2011), services of general interest are services that public authorities of the EU member countries classify as being of general interest and, therefore, subject to specific public service obligations. They can be provided either by the state or by the private sector. There are three categories of services of general interest: 1) *Services of general economic interest*, which are basic services that are carried out in return for payment, such as postal services. These services are subject to European internal market and rules of competition. However, there may be derogations to these rules if necessary to protect citizens’ access to basic services. 2) *Non-economic services*, such as the police, justice and statutory social security schemes, are not subject to specific European legislation or to internal market and competition rules. 3) *Social services of general interest* are those that respond to the needs of vulnerable citizens, and are based on the principles of solidarity and equal access. They can be both of an economic or non-economic nature. These activities (services) differ in the dimension, ranging from the global or European to purely local. Public services in the European Union are examined from various perspectives and approaches by, e.g. Van De Walle (2009); Morton (2012); Clifton et al. (2016).

1.2 Public Expenditures in the European Context

In the EU, it has been attempted to create a classification of the functions of government that are reflected in public expenditures so as to make it possible to perform comparative analyses, which is associated with the funding of public services. The Classification of the Functions of Government (COFOG) is an international classification standard used for structuring state expenditures (national budgets) with respect to their purpose (function). From the international perspective, it is a segmentation that enables comparing the structure of expenditures of the public service (Leitner and Stehrer, 2016). A number of authors investigate public expenditures allocated to public services from different viewpoints, e.g. (Shelton, 2007; Ferreira et al., 2013; Mura, 2014; Meričková et al., 2017; Pascual-Saez et al., 2017; Dudzeviciute et al., 2018).

2. Data and Methodology

The analysis utilises data from the Eurostat statistics database (Annual government finance statistics – government expenditure by function – COFOG) (Eurostat, 2019). The Classification of the Functions of Government (COFOG) has three levels of detail: Divisions, Groups, and

Classes. The ten Divisions could be seen as the broad objectives of government, while the Groups and Classes detail the means by which these broad objectives are achieved (Eurostat, 2011). Analysed are selected areas of public policy from the viewpoint of public expenditures by functions (COFOG) in the period 2014-2017. The selected expenditures are represented by seven groups of general government expenditures (COFOG second level, see Table 1). For a more detailed characteristic of public expenditures on services, see Eurostat (2011) or Leitner and Stehrer (2016).

Table 1: Public Expenditures by Selected Functions (COFOG)

COFOG first level(divisions)	COFOG second level (groups)	service
03 Public order and safety	03.1 Police services	collective
04 Economic affairs	04.5 Transport	collective
05 Environmental protection	05.1 Waste management	collective
06 Housing and and community amenities	06.1 Housing development	collective
07 Health	07.4 Public health services	individual
08 Recreation, culture and religion	08.1 Recreational and sporting services	individual
	08.2 Cultural services	individual

Source: Authors according to Eurostat (2011)

The object of the quantitative analysis is a set of 28 EU countries, comprising: Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), the Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (EL), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), the United Kingdom (UK). The period 2014-2017 was selected for the purposes of the analysis, with 2014 as the default year and 2017 as the last year when the data on all EU countries were available. The Pearson correlation coefficient was applied to test correlations of the variables (general government expenditures - COFOG second level) in the period 2014-2017. The highest correlation rate between public expenditures is $r=0.455$ and the correlation is significant at the 0.05 level.

The similarities and differences between the EU countries by the volume of the selected public expenditures (COFOG) in the period 2014-2017 as average are evaluated by applying multidimensional scaling. Multidimensional scaling (MDS) depicts objects, characterised by multidimensional profiles, in an area (or a multidimensional space), which enables their clear comparison. MDS has the role of a non-parametric factor analysis in cases when relations between variables are not characterised by correlations but random coefficients or rates. This method is suitable to compare objects when the basis of the dimensions compared is unknown. The aim of multidimensional scaling is to determine the number of dimensions and the position of an object (object coordinates). The higher the similarity between two objects (in our case EU countries) is, the closer the points representing these are. The output of multidimensional scaling is a scatter diagram (perception map), where individual axes represent basic dimensions, and individual points the objects compared. Numerical outputs form the basis for the construction of the image. Two factors are decisive in the evaluation of the validity of multidimensional scaling: 1) *s-stress* (good-compatibility rate) of the difference between distances calculated through multidimensional scaling and real distances prior to the calculation. The lower the *s-stress* value, the better the compatibility of the model and data. 2) *correlation coefficient squared* (RSQ) of input distances of the distances of objects and distances that are calculated and determined based on coordinates of the individual objects in

the perception map. RSQ also demonstrates the level of compatibility between data and the model. RSQ reaches values within the interval $<0; 1>$, while the values ≥ 0.60 are considered acceptable for valid results (Borg and Groenen, 2005). The data were processed with the software IBM SPSS Statistics 23.

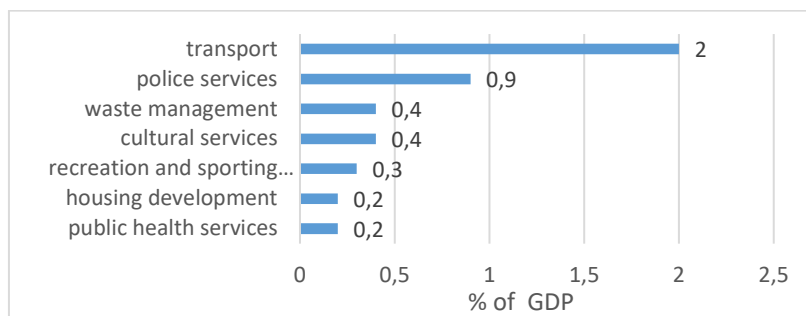
3. Problem Solution

In the period 2014-2017 1) the analysis of selected public expenditures for the EU, 2) analysis of EU countries according to similarities and differences in volume of public expenditures are performed.

3.1 The Position and Volume of Public Expenditures on Selected Services in the EU

The average volume of total public expenditures reached 46.7% of GDP in the period 2014-2017 in the EU-28. The highest share in the structure of total public expenditures by ten functions (COFOG first level) was represented by public expenditures on social protection (18.8% of GDP), health (7% of GDP), general public services (5.8% of GDP) and education (4.6% of GDP). For the EU-28 in the period 2014-2017 as average, out of the six divisions of general government expenditures (COFOG first level), the seven groups of public expenditures are analysed (COFOG second level) (Figure 1). In the EU-28, the highest volume of public expenditures allocated to these services was represented by transport (2.0% of GDP) and police services (0.9% of GDP). The share of public expenditures on the other services reached between 0.2 and 0.4% of GDP, namely public expenditures on cultural services and waste management (0.4%), expenditures on recreational and sporting services (0.3%), housing development and public health service (0.2 %). More detailed information is provided in Figure 1.

Figure 1: Volume of Public Expenditures (COFOG) on Selected Services in the EU-28 in the Period 2014-2017 as average



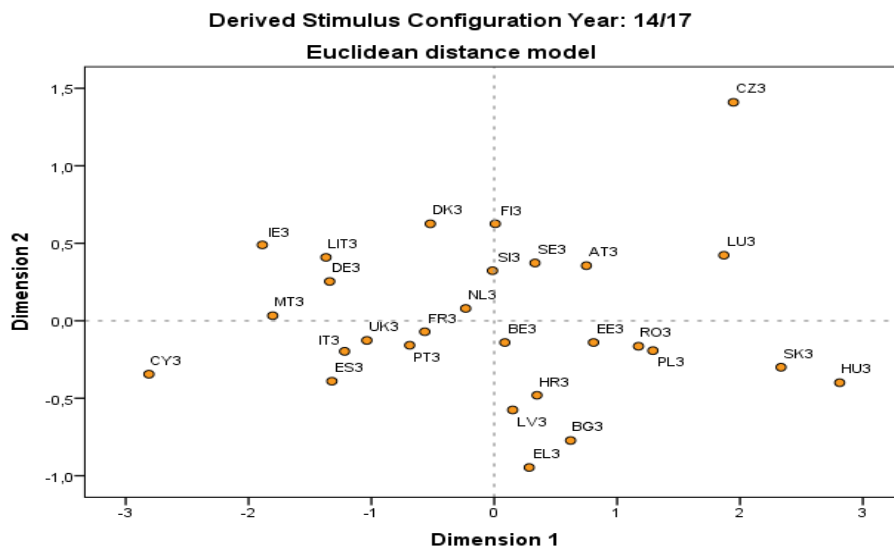
Source: Authors according to Eurostat (2019)

3.2 Similarities and Differences of EU Countries by Public Expenditures Using Multidimensional Scaling

In the period 2014-2017 as average, the EU countries are analysed in terms of their similarities and differences in the volume of public expenditures on services, by applying multidimensional scaling. The Euclidean Distance Model, computed according to distances of EU countries and their variables (public expenditures on services, is presented below in a two-dimensional form ($k = 2$). In the period 2014-2017 as average for matrix: Stress = 0.09164 and

the $RSQ = 0.96894$. The values of the stress show a good compatibility, but not a complete match of the model with the input data, and RSQ is adequately high. The similarity between EU countries can be seen (in Figure 2) in the distances of the depicted points, and clusters of countries on dimension 1 (values from -3 to 3) and dimension 2 (values from -1 to 1.5) can be distinguished.

Figure 2: EU Countries according to Public Expenditures on Services in 2014-2017



Source: Authors

The division of EU countries from Figure 2 into eight clusters, which represent the similarity of volume of public expenditures for the majority of analysed services, is seen in Table 2.

Table 2: Clusters of EU Countries by the Similarity of Public Expenditures in the Period 2014-2017

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
CZ, LU	AT, BE, DK, FI, FR, NL, SE, SI	DE, IE, LT	CY, MT	ES, IT, PT, UK	BG, EL HR, LV	EE, PL, RO	HU, SK

Source: Authors

The clusters of countries (Table 2) are characterised according to public expenditures on services in the period 2014-2017 as follows:

Cluster 1 is composed of countries with a higher volume of public expenditures on transport (3.5-3.6% GDP) but low expenditures allocated to police services (0.5-0.9% GDP) in comparison to the other groups of countries. Public expenditures on the other services are: housing development (0.2-0.3 %GDP), cultural services (0.5-0.6% GDP), waste management (0.3 % GDP) and public health services (in CZ 1.4% GDP). *Cluster 2* represents eight countries which allocate a volume of public expenditures on transport of 2.0 to 2.9% GDP, but allocate lower public expenditures on public health services and housing development (0.1-0.3%

GDP). Public expenditures on the other services (in % GDP) were: police services (0.5-1.1%), cultural services (0.4-0.7%), recreational and sporting services (0.3-0.6%), and waste management (0.1-0.5% GDP). *Cluster 3* comprises three countries with a lower volume of public expenditures on transport (1.5% GDP) and police services (0.6-0.7% GDP), compared to the other groups of countries. The volume of public expenditures on the other services (in % GDP) was: cultural services (0.2-0.7%), recreational and sporting services (0.1-0.3%), public health services (0.1-0.2%), housing development (0.1%) and waste management (0.2-0.3%). *Cluster 4* is represented by two countries with the lowest range of public expenditures on transport (0.6-1.3%), compared to the other groups of countries. Public expenditures on police services reach 0.7-1.3% GDP, expenditures on cultural services 0.3-0.8% GDP, and waste management 0.2-0.8% GDP. Public expenditures allocated to the other services (in % GDP): housing development (0.1-0.2%), recreational and sporting services (0.1-0.3%). CY and MT do not allocate any public expenditures on public health services of the preventative character. *Cluster 5* is composed of four countries with lower public expenditures on transport (1.5-2.0% GDP) in comparison to the other countries. The volume of public expenditures (in % GDP) on the other services: police services (1.0-1.3% GDP), waste management (0.2-1.0% GDP), cultural services (0.2-0.5%), recreational and sporting services (0.2-0.4%), expenditures on housing development (0.2-0.3%) and public health services (0.1-0.2% GDP). *Cluster 6* represents four countries with public expenditures on transport ranging from 2.5-2.8% GDP, on police services 1.2-1.4% GDP, and on cultural services 0.1-1.1% GDP. The volume of public expenditures on the other services was: housing development (except HR) and waste management except EL, HR (0.3-0.7% GDP), recreational and sporting services (0.1-0.4% GDP) and public health services (0.1% GDP). *Cluster 7* comprises three countries characterised by the volume of public expenditures on transport ranging from 2.9-3.3% GDP, on police services 1.0-1.2% GDP, and on cultural services 0.4-1.0% GDP. The volume of public expenditures on the other services: recreational and sporting services (0.3-0.4% GDP), housing development and waste management (0.1-0.4% GDP), public health services (except EE) 0.1% GDP. *Cluster 8* is composed of two countries with the highest range of public expenditures on transport (4.0-4.1% GDP) in comparison to the other groups of countries. The volume of public expenditures on the other services is: police services (1.0-1.3% GDP), expenditures on cultural services (0.5-1.0% GDP), on recreational and sporting services (0.2-0.8% GDP), expenditures on waste management (0.2-0.5% GDP), housing development (0.2% GDP) and public health service only in HU (0.1% GDP).

When assessing all EU countries by the volume of public expenditures on services, a higher similarity is observed in public expenditures on housing development, recreational and sporting services, partially on cultural services. In the case of the allocated public expenditures on transport, police services, waste management or public health services, a lower similarity is observed. The most similar EU countries (Figure 2, Table 2) are mainly: clusters 3 and 5 in the volume of public expenditures on transport and public health services, clusters 6 and 7 in the volume of public expenditures on police services and public health services, clusters 7 and 8 in the volume of public expenditures on police services and public health services. Conversely, among the EU countries, the largest differences can be seen (Figure 2) in dimension 1: between CY in the fourth cluster, and HU, SK in the eighth cluster according to the volume of public expenditures on transport, and between CY in the fourth cluster and the countries in the first cluster (CZ, LU) according to public expenditures allocated to transport; in the case of CZ also according to public expenditures on public health services of the preventative character. In dimension 2, the largest differences are observed between CZ in the first cluster and EL, BG in the sixth cluster according to the volume of public expenditures on public health services. These countries also show differences in the volume of allocated public expenditures on police services.

These differences are connected with the organisation of public services, which differs due to cultural traditions, historical and geographical conditions of each member state and due to characteristic features of the respective activity. Also, over the years, the demand for public services and the way they are provided has been changing. According to Van De Walle (2009) or European Commission (2011), services are often provided by the private sector (either profit or not-for-profit). This change in approach is driven by processes of deregulation, by changes in government policies, and changes in users' needs and expectations.

4. Conclusion

Public policies are related to the public interest, are closely linked to decision-making about public finances, and their impact influences the range and structure of public services. The article aimed to evaluate public expenditures allocated to selected public services, focusing on similarities and differences in the EU countries. The quantitative analysis was carried out for the period 2014-2017, applying the method of multidimensional scaling. The results showed a division of the EU countries into eight clusters according to the volume of public expenditures on services. The EU countries show a higher similarity of public expenditures on housing development, recreational and sporting services and partially on cultural services. Some groups of countries also demonstrate marked differences, in particular in the volume of public expenditures on transport and public health services. These findings reflect financial possibilities and priorities of the EU countries in the selected areas of public policies. Conversely, identical share of public expenditures of GDP allocated to a particular public service can have different priorities of public policies in different countries. In connection to the analysis, the theme for further research can be the assessment of the efficiency of public expenditures allocated to selected services in EU countries.

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Gold-Plating in Legislation of the Member States of the European Union

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Abstract

Gold-plating is characterized as extending the requirements set out in EU legislation in the process of their transposition into the national legal order of the Member States beyond the established framework, but still within the limits of legality. Directive leaves the State with more flexibility in how it transfers its purpose into its legislation. EU legislation can provide an excellent opportunity to enforce unpopular national measures. In some cases, stricter legislation can be beneficial, but in most cases it imposes an excessive administrative burden and additional costs for entrepreneurs. Burdening national operators beyond the requirements imposed by the EU hinders the creation of the single market and contributes to the deterioration of the business environment. The aim of the article is to illustrate specific cases the effect of gold-plating and to present the ways which Member States use to prevent it. We analyse the legislation of the EU and selected Member States, respectively the official reports of the Member State governments on this issue.

Keywords: directives, European Union, gold-plating

JEL Classification: K30, K33, K40

1. Introduction

Adopting uniform rules within the EU is much more effective than if Member States adopted different rules at national or regional level. However, the Treaties themselves respect and promote the national and regional diversity of Member States and establish areas where harmonization of the law is excluded - education, culture or health (Articles 165, 166, 167 and 168 TFEU). For the functioning of the single market, different rules may create unnecessary complications, and in this case it is desirable that the rules be approximated as much as possible. On the basis of the principle of proportionality, the EU can only take such measures as are necessary to achieve the objectives set out in the Treaties. It is based on the choice of appropriate legal instruments and applies to all kinds of powers.

Directives are binding on each Member State to which they are addressed, but only as a result and the way in which their national authorities transpose them into their national order is left to their discretion. Forms and methods of achieving the result in Art. 288 TFEU implies the adoption of a specific legal instrument. The directive thus leaves the State more flexibility in transposing its purpose into its legislation and respects the specificities of national legal systems. The directive must be transposed into generally binding legislation. Transposition can be done by adopting a new law, amending an existing law and, in the Slovak Republic, by adopting an approximation government regulation. The legislation transposing the directive into national law may enter into force at different times in the Member States (but this should not be earlier than provided in the directive) and the national subjects of the Member State

concerned are bound only by the date of entry into force of this act. Until then, individuals are not bound by the content of the adopted directive.

2. Directives as a Problematic Legal Instrument

Transposing the directive properly and in time is one of the Member States' obligations under EU membership. States are required to establish or adapt their legislation to the directive within the transposition deadline. Proper and timely transposition of the directives is monitored by the Commission, as Member States are obliged to report on how they have implemented the directive into their own legal order. The Commission, as guardian of the Treaties, first notifies the State in the event of non-compliance with the transposition obligation and seeks to remedy the situation in the pre-trial phase. If the State has still failed to fulfill its obligation, the Commission may bring an action before the Court of Justice for failure to fulfill obligations by the Member State (Article 258 TFEU). In these proceedings, the Court declares a breach/non-compliance by a Member State and may at the same time impose financial penalties (in the form of a single fine and/or repeated penalties). The Lisbon revision enshrined the possibility of imposing sanctions already in primary proceedings.

However, it is not uncommon for States to fail to comply with the transposition deadline and the Commission does not automatically bring an action before the Court of Justice, but seeks to remedy the situation in the pre-trial phase of communication between the infringing State and the Commission. The merit of this phase is to prevent proceedings before the Court of Justice.

One of the countries that often failed to meet the deadline for transposition was Germany. The reason is a strict hierarchical legal system with more than 100 years of tradition, especially in the field of civil law. (Kilian, 2004) For example, the Directive on tobacco advertising directive (2003/33/EC) Germany finally transposed in December 2006, 17 months after the deadline, and only after the Commission referred the government to the ECJ (because of the threat of financial sanctions). Hungary, Czechia, and Spain tried to transpose the directive in a way restricting its application. The Commission challenged the transposition measures and eventually the countries had to amend their national legislation after a considerable delay. (Steunenbergh, Toshkov, 2008) According to data for 2018, Germany has an average delay of 7.1 months, Slovakia 2.7 months, Czech Republic 8.9 months, Austria 9.4 months, Slovenia up to 12.5 months, while the EU average is 8.4 months. (European Commission, [online], 2019)

In the transposition process, the national legislator may, as a result, alter the purpose envisaged by the directive. "Directives need more attention, as there is a likelihood that new obligations will be imposed as part of the transposition process because of the need for transposition." (Ministerstvo hospodárstva, [online], 2019) Possible divergent transposition between EU Member States can be avoided by replacing directives with regulations. The regulations do not need to be transposed into national order (their transposition is even prohibited in order to respect the principle of legal certainty; however, they may be accompanied by national laws) and take effect for the whole EU territory at the same time. The regulations have direct effect, i.e. they directly regulate the rights and obligations of individuals in the Member States and thus have characteristics similar to national laws. However, they also commit Member States, as the EU relies on states to exercise their law. Normally, because of their application, regulations must be accompanied by the laws of the Member States in which the states delegate the various institutions to their performance, or regulate different procedural procedures, as regulations are sometimes limited to material rules. It is also necessary to provide for penalties for infringements of the regulations, as criminal law remains a competence of the Member

States and, because of differences between States, has to be established at national level. (Křepelka, 2017)

Indeed, we can now see a tendency to replace directives by regulations because of the adoption of the same legislation throughout the EU and at the same time. According to Křepelka (2017), this situation in the EU could be described as a federalizational tendency. The European Commission has in recent years started to simplify the Union legal framework and the number of directives was reduced significantly. (Savin, 2018) The almost full unification through EU regulations is the minority option suitable especially for the short list of the exclusive EU competences under Art 3 of TFEU (namely external trade policy, competition protection and single currency). (Šaroč, Smejkal, 2018) E.g. EU civil aviation legislation is addressed by EU regulations due to its international character. Certain legislative areas are significantly harmonized and liberalized as a result of being part of the EU's single internal market, resulting in a narrow space for goldplating (eg Articles 99-100 TEU transport). (Ministerstvo dopravy a výstavby, [online], 2018)

One consequence of replacing directives with regulations would also be the removal of gold plating.

3. What is Gold-Plating?

Gold-plating is characterized as extending the requirements set out in EU legislation (directives) in the process of their transposition into the national legal order of the Member States beyond the established framework, but still within the limits of legality. This narrow definition currently covers the different situations arising from the transposition of directives. Examples of gold plating include:

- a. the Member State implements the requirements more strictly than the Directive;
- b. extends the scope of the regulation to cases other than those mentioned by the EU;
- c. there is an earlier implementation than the Directive states;
- d. entities have to do some of the obligations in duplicate (reporting, increased reporting rate);
- e. the exemptions in the Directive do not apply (gold-plating may also arise by simply replacing the conjunction 'or' by 'and');
- f. the State will continue to apply stricter requirements in its legislation even after the application of a directive with less stringent requirements in the field;
- g. more information is required than is needed, respectively information that has already been delivered to other authorities, or requesting information from a larger number of businesses than necessary, etc. (Ministerstvo hospodárstva, [online], 2018)

The phenomenon is not precisely defined, but in any study or analysis of gold-plating, the subject may define it for the specific purpose of the analysis. Basically, gold-plating is an incorrect transposition of the directive, which usually incurs unnecessary costs that would not otherwise have been incurred and could have been avoided. The European Commission itself draws attention to the effect of gold-plating and seeks to eliminate it.

Gold-plating can be divided into active and passive. In active gold-plating, a Member State intentionally tightens the requirements set out in the Directive (material or procedural). Passive gold-plating is a case where a State maintains existing national legislation going beyond the requirements of the Directive and refrains from repealing it. (Michalík, P. et al., 2014).

Gold-plating can occur for several reasons. EU legislation can provide an excellent opportunity to enforce unpopular government measures that successfully hide behind the demands of "bad Brussels" and the public is misguided by the EU's demands on Member States and their citizens. These are often false claims by national governments that the requirements in question are required by EU law. In certain cases, stricter legislation can be beneficial, but in most cases it imposes an excessive administrative burden and additional costs for avoidable entrepreneurs.

Burdening national subjects beyond the requirements imposed by the EU hinders the creation of the single market and contributes to the deterioration of the business environment. As a result, gold-plating prevents the objectives to be achieved by the legislation in question. What is more, additional obligations may not be necessary or relevant to the intentions. This may result in increased costs, excessive regulatory burdens on businesses and fragmentation of the single market. The conditions to be met by operators in one country are not required for their competitors in other Member States, and thus their competitiveness towards them decreases. Gold-plating can even lead to reverse discrimination of home persons against the persons from those other Member States which have avoided gold-plating. (Král, 2015) Given the highly differentiated internal economic space of the European Union, it is essential to ensure the effective and efficient use of the economic potential of national economic complexes. (Rýsyová, Čajka, Kazanský, 2020) The fundamental idea of the economic prosperity of the EU is to bridge the gap between the regions and increase their competitiveness. (Harakařová, 2016) In this case, the equation applies - less bureaucracy equals increased competitiveness and higher economic growth.

4. Gold-Plating in a Positive Sense

Gold-plating can be divided into justified and unjustified. In the case of justified gold-plating, we say that more ambitious (or more progressive) regulation has unquestionable benefits and added value, which is the realization of a legitimate public interest set by the state (e.g. internal market protection, social protection or environmental objectives). The merits are justified by the added value that makes regulation more progressive than imposed by the EU directive, making the issue more ambitious than required by the directive. In such cases, however, it must be clearly justified that such gold-plating is really necessary and its added value or social importance exceeds the costs associated with it in the environment. Extending the content of the obligations under EU legislation when transposing them, without assessing the benefits and added value of such non-minimalist transposition (e.g. through ex ante analysis) is considered as unjustified gold-plating. (Ministerstvo hospodářstva, [online], 2018)

Sometimes EU legislation contains only minimum requirements and, in order to ensure greater protection, it is desirable that national legislation lays down conditions going beyond the directive or stricter standards. Examples include regulations raising minimum standards of consumer protection responding to unfair practices (the "Šmejdi" case), health and safety at work, and ensuring protection for vulnerable groups of workers (pregnant women, postpartum mothers, breastfeeding workers and young workers), protection of workers' pension rights, increased transport safety (determination of deeper tread pattern for winter tires of certain categories of motor vehicles; frequency of technical inspection of buses over 8 years of operation), and a higher minimum age for obtaining a ship captain professional license). (Ministerstvo dopravy, [online], 2019)

Based on "Legislative Audit from the View of Gold Plating", it was confirmed that gold-plating cannot be perceived automatically as a negative phenomenon and in approximately three quarters of cases the added value of existing gold plating was largely justified. (Ministerstvo hospodářstva, [online], 2018)

5. Examples of Gold-Plating in Selected Countries

Below we analyse cases of gold-plating to show the variety of incorrect transposition of directives.

5.1 The United Kingdom

The EU Working Time Directive regulates employees' working time, annual leave and breaks allowance. The UK transposition contains many examples of gold-plating. For example, the Directive provides for 20 days of annual leave, while UK legislation requires 28. In addition, the record keeping rules are much more difficult than necessary and the exemption for workers who set their own hours has been transposed so vaguely that it has lost its meaning. (Di Franco, [online], 2018)

5.2 Czechia

A notoriously famous example is the introduction of non-contact faucets in gastronomic services or the prohibition of the sale of unpackaged bread.

The subsidization of renewable energy sources, especially photovoltaics, has the most dramatic consequences of gold-plating in Czech legislation. Upon accession to the EU, Czechia undertook that the share of electricity production from alternative sources will be at least 13.5% by 2020. Referring to this commitment, the Czech Republic has set up generous conditions for subsidies (or feed-in tariffs) for solar energy, which, together with a decrease in the costs of building solar panels, led to a sharp increase in the number of photovoltaic power plants. As a result, there were enormous costs to the state and, in particular, future liabilities, energy costs for consumers increased and huge areas of agricultural land were avoided. (Břicháček, 2014)

Other examples in are Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport - obligation to blend biofuels with diesel to a greater extent than required by EU law (instead of 5.75% in the Directive increased to 4.1% for petrol and 6% for diesel and breach of this obligation is highly sanctioned); and Directive 2004/18/EC on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts - under the Directive, the aggregate value of contracts awarded for additional works or services may not exceed 50% of the original contract, the transposition sets 30%. In fact, this means that in case of unforeseeable circumstances (for example, if the condition of the land is worse than expected), the contractor may lose the contract on this basis. (Kruliš, [online], 2015)

5.3 Slovakia

An example of gold-plating is the occupational health service for all employees, regardless of the category of work in terms of health risk assessment. This obligation arises from the tightening of the European Framework Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work. The Directive provides premise for employers to provide workers with protective and preventive services against health threats at work, but specific legislation is left to the Member States. The Slovak legislation does not allow the employer to personally take responsibility for the measures in question. In Poland, an employer employing fewer than 10 employees has the possibility to perform a work health service personally and with a higher level of professional qualification of up to 20 employees, similarly in Portugal up to 10 employees. In Austria even up to 50 employees. (Centrum lepšej regulácie, [online], 2018)

6. Treatment of Gold-Plating on the Example of Slovakia

The Member States themselves take responsibility for the measures taken and put in place mechanisms to control the prevention of gold-plating in national legislation. The Ministry of Economy of the Slovak Republic, as the central body of state administration, issued its own document “Audit of legislation from the point of view of gold plating” from December 2018, the purpose of which was to analyse the legislation and submit proposals to remove gold-plating. It is part of the “RIA 2020 Action Plan - Better Regulation Strategy”, but the deadline for developing a gold-plating evaluation methodology is 31.3.2020. Therefore, the article will not incorporate the latest information. This document summarizes the results of analyses of individual ministries and other central state administration bodies and proposals for measures to eliminate unjustified goldplating.

The Better Regulation Strategy is designed to adjust the creation of regulations. In several countries, the principle “one-in one-out” applies - that means, with each new regulation, one existing one is deleted, or a comparable load should be eliminated for each new burden resulting from the new regulation. The ambition of the Ministry of Economy was to introduce this principle into the legislative process by the end of 2021. This is not an easy task in the field of consumer protection, which is heavily regulated by EU law, so the state must strike a balance between consumer rights and the burden on businesses.

The outcome of this analysis was the finding that some ministries and central government authorities have no directives within their jurisdiction, some have not identified any gold-plating, others have identified exclusively substantiated gold-plating, and 5 ministries have identified unjustified gold-plating and formulated measures to eliminate it. 9 out of 24 ministries and other central government bodies identified the occurrence of gold-plating within their remit. Preliminary results also show that 21% of all gold-plating cases were proposed for removal as unfounded. (Ministerstvo hospodárstva, [online], 2018)

The analysis identified several cases of failure to transpose the possibility of exemption into national legislation, but were not evaluated as gold-plating with regard to the fact that these exemptions were not applicable to conditions in Slovakia (there are no such entities in Slovakia), respectively their application would be ineffective (applicable to a small number of subjects). (Ministerstvo hospodárstva, [online], 2018)

25% of all the provisions that showed the presence of gold-plating were proposed by the ministries and other central government bodies for removal. The case study of the MoE shows that external experts identified almost 70% more gold-plating cases than the resort (from the original 46 increase to 78). At the same time, external experts suggested 3.5 times more cases to be removed than suggested by the resort (from the original 6 increase to 27). (Ministerstvo hospodárstva, [online], 2018)

In accordance with the Unified Methodology for the Assessment of Selected Impacts (effective as of April 2016), the obligatory part of the Impact Clause of each bill is its ex-ante assessment also in terms of gold-plating. This assessment is then the subject of an opinion of the Commission for the assessment of selected impacts, which is also a mandatory part of the impact clause. No gold-plating was indicated ex-ante in any draft law transposing the analysed directives into national legislation. Consequently, even on the basis of implementation practice or communications from market participants, no additional obligations have been identified for market participants or employees that would be overburdened to the detriment of the objectives of the directives in question. (Ministerstvo hospodárstva, [online], 2018) The analyses are referred to external entities for review.

The analyses of the directives under the responsibility of some ministries and other central state administration bodies have not been elaborated enough to make it clear whether goldplating is present or not. The consistency and methodology applied by the competent authorities to the analysis differed. Therefore, the result so far does not automatically mean that the sectors where goldplating was most frequently detected are those where it is really the most. (Ministerstvo hospodárstva, [online], 2018)

Of the 417 transpositions analysed, up to 120 had gold-plating features. According to the ministries, 90 cases were justified and 30 were unjustified gold-plating. The justification of the merits of gold-plating from the point of view of the public authority may differ from the opinion of external reviewers and the public. In the context of disproportionately burdensome transpositions, Slovakia goes beyond European standards.

7. Conclusion

Unjustified gold plating is not a desired phenomenon in national legislation. As a result of the different Member States' legislation, the single market is deformed and unnecessarily burdensome for businesses. On the other hand, there are cases where gold-plating is directly desirable and cannot be automatically considered unnecessary and automatically removed. A balance needs to be struck against the protection of individuals and burdened business entities. In selected examples, we pointed out the unnecessary obligations arising from the gold-plated legislation.

Member States are aware of the consequences of incorrect transposition of directives and try to remedy them by various analyses of legislation, either ex post or even before the very adoption of laws.

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Silver Economy in European Union – Opportunity or Threat

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Abstract

Demographic development in Europe are currently considered to be one of its greatest threats, not only in terms of the so-called continent extinction, but especially in the context of economic development in Europe. The silver economy offers the potential of opportunities on the one hand, but on the other hand the silver economy threatens the economies of European states. The article partially describes the demographic development in Europe or in the European Union (EU) appropriate to the context of the silver economy issue, we explain the concept of silver economy and other related terms used in relevant EU documents. The article aims to summarize the opportunities and threats to demographic development in the EU by analyzing the various factors affecting the development of the silver economy. In this article we will use EU statistical databases, documents and publications on the subject, scientific articles and publications of domestic and foreign authors.

Keywords: *demographic trend, private consumption, public expenditures, silver economy*

JEL Classification: *J11, J14, J18, H50, D14*

1. Introduction

The European Commission (2018) defines in its Silver Economy the silver economy as the sum of all economic activities that serve the needs of people aged 50 and over, including the products and services they buy directly, and the other economic activity that this expenditure generates. The silver economy is made up of post-production consumers over 50 years of age. Although the term older age is commonly used, there is no precise age limit. For example, the UN also did not accept the standard age criterion, but in general people aged 60/65 + represent the older population. The classification of age groups usually varies within countries, often reflecting differences in social classes or working capacity. Determination of old age in this wide definition may distort some areas examining threats or opportunities, but each time we try to determine more precisely the age definition for which you define the stated objective of the article. Also in the literature is referred to a wide age variance applied for senior term often refers to the notion pensioner, but this does not accurately reflect the status of the studied populations.

In the EU in 2015, there were around 199 million people aged 50 and over (39% of the total population) who consumed goods and services worth a total of €3.7 trillion. Consumption financed by private sources belonging to this age group was the majority. In 2015, the silver economy created a GDP of 4.2 trillion euros and also created 72 million jobs. By 2025, the values are projected to increase: silver market consumption will amount to 5.7 trillion euros, generating GDP of 6.4 trillion euros and creating 88 million jobs. (European Commission, 2018). The European Silver Economy is the third largest economy in the world behind China and the USA. (European Commission, 2019).

2. Structural Demographic Change in the European Union

Demographic developments in the EU are currently under consideration as this will affect the economy of the EU and its Member States in the future, most often demographic developments are projected by 2050 or 2070. Europe has never had as high a population as it is in the past, that the total population is decreasing. The demographic development is mainly caused by structural changes in a way that negatively alters the working and non-working, and in the future will reduce the number of working-age population. Currently, there are more than 3 people of working age (from 15-64 years) per capita aged 65 and over, and this ratio will decrease to the detriment of workers in the future (Eurostat, 2020b). It seems that the single senior has only two people of working age in 2070, which means that the economic dependence of the elderly will increase. The problem is not only the population, but especially its age structure, also within the age structure of seniors. By 2050, the population aged over 65 will increase from 101 million to 149 million and the population aged 75-84 will increase by 60.5%. It is even assumed that the number of very old people (over 85 years) will increase from 13.8 million to 31.8 million by 2050, and people over the age of 100 will be about half a million in 2050 (in 2018 it was 106 thousand very old people) (Eurostat, 2020b). For a sustainable Silver Economy, therefore, it is important firstly to support active and healthy ageing among the over 50's, to keep them in the workforce for as long as possible. Secondly it is essential that key services, such as health and care, keep pace with their needs.

The increase in the middle age can be considered as the most significant parameter of the increasing average age of the population in the EU; from 1990 to 2050 we can observe increasing differences in the median middle age within the EU countries, eg. in Slovakia, Lithuania, Portugal and Poland, the mean age will increase by more than 15 years in those years (Eurostat, 2020b). Within the EU, we see a different proportion of elderly in the total population as well as the dynamics of aging is different in Member States. The ageing process has started in every countries of European Union because their children population fell down below 25 percent. The time periods of this process were significantly different. Today the youngest population has Ireland, Cyprus, Luxembourg and Slovakia. The oldest population have Germany and Italy. Also, the aging process has a different intensity - the ageing process was very quickly in the regions in Bulgaria, Romania and Lithuania, the minimal changes from the point of ageing process were typical for this EU countries: Belgium, Slovenia, France, UK, Sweden, Poland, Ireland, Luxembourg and Cyprus (Šotkovský, 2014). Also, the economic dependence of people over 65 in 2050 will show large differences in the EU countries from 40% (Sweden, Malta, Cyprus) to 65.8% (Greece) (Eurostat, 2020b).

3. Problem Formulation and Methodology

In this article we analyze what opportunities or threats will bring structural demographic changes to the European Union in the future in the context of the silver economy. The research focuses on the age group of seniors over 65, as it is a group of seniors who are already retired across the EU (European Commission, 2018b). In the analysis we use the Eurostat statistical base, which defines our target group with an age limit of over 65 years and also projects the consequences of demographic changes up to 2050. The most recent statistics come from 2016 to 2018 depending on the parameters studied. In addition, we use the EU strategic documents and the European Commission's analytical reports on the aging of the EU population and the silver economy. Some of these documents project the economic impact of demographic development until 2070.

Opportunities and threats of the silver economy are determined by the life cycle of the population over 65 years of age and the changes are more pronounced in the population of very old people. We analyze the individual parameters examined across Member States, focusing on the structure of the needs of the elderly in the context of their aging and the potential risks. The European Commission (2019) an aging population can be divided into 3 groups: active, fragile and dependent. In supporting the interpretation of the results, we use research articles and discussions by authors dealing with the issue of the effects of aging and its impact on the economies of EU Member States and EU policies. The life cycle affects the consumption of public funds; Also, the length of time during which workers are able to support seniors through transfers to public funds in the EU is different (Istemic, Hammer, Prskawetz, 2019). In the context of the concept of silver economy (Bran, Popescu, Stanciu, 2019) identifies the main areas that can aggregate demand, namely health care, housing, transportation, banking and tourism. The article focuses on the housing of seniors and the associated costs within the EU as a threat to the silver economy, as well as the reasons for social exclusion of this population due to the inability to pay their basic living costs. In this paper we analyze the impact of high living costs of senior households on creating opportunities for the silver economy. We also point to the future threat to public finances in the case of an increasing group of very old seniors over 85 years of age.

4. Household Living Cost and Adequate Pensions

In the age group of seniors over 65 years, there are recorded economic and social differences, which depend mainly on the economy of the country in which seniors live. During the period from the accession to the EU, our population did not develop poorly, the standard of living (measured by the GDP per capita) increases, but we need to remember that increasing education level of the population and a higher level of human capital brings also the need to keep. (Šimpach, Langhamrová, 2014) For a generation of people aged 65 to 75 also uses the term young old. The young old are more numerous than previous generations of seniors, but they are healthier and richer. In 2070, 12.5% of the population will be over 80 in the EU. (European Commission, 2018b). This population is more economic active than before (as long as possible), because the population live longer. Seniors in this age group still working, which is one factor that helps to ensure that seniors remain healthy longer, a positive impact on their mental as well as physical health.

On the other hand, it is the fact that physical and mental health of older people very sharply deteriorating and demand for health and social care is increasing and their active life declines. The cost of public pensions for the senior population over 75 is projected to increase by 2.2% of GDP by 2070, while contributions to social systems on average within the EU will be only 0.1% of GDP higher. (European Commission, 2018b). In other words, increasing public finance demands as a percentage of GDP resulting from more pensioners and fewer pensioners will be a threat to the economies of EU Member States' shields. At the same time, it is crucial whether future pensions will be adequate to create opportunities for the silver economy.

The structure of households is a serious factor in the silver economy and has a decisive impact on the standard of living and needs of seniors. At present, the number of households with one senior (singularization of seniors) is increasing, with one-member households with a woman - elderly woman prevailing (Maj-Waśniowska, 2018). This fact has a significant impact on consumption, since all necessary costs financed by only one member of the household, the largest item consists of the cost of housing. Beran, Franek (2018) point to lower costs for a two-person household. One person (single) households do not remain on the occasion almost no funding or fall into poverty, especially in post-communist countries. In the EU, 58.5 elderly

men and only 39.6% of older women over 65 live in a household with a partner. (Eurostat, 2020) The number of such households varies from one EU Member State to the next - most single men's seniors live in Denmark, the least in Cyprus and Portugal, while the differences between them are not large. Most single women seniors live in Denmark and the least in Cyprus, the difference between countries is more pronounced. Households with one woman - elderly have much greater problems with the payment of basic goods and services than households with one male - senior, in 2018 such households were 6.1% (Eurostat, 2020). Such a structure of households with one senior of the most vulnerable group of households and is expected to increase the risk of social exclusion. Gender imbalances are most pronounced among very old people (over the age of 85), on average, there are two very old women per one very old man. (Eurostat, 2020), which can be considered a much greater threat to these women than is the case with lower age groups of seniors living in single households.

The singularization of households related to so-called unoccupied dwellings - housing properties that are too large for the needs of household members and have uninhabited rooms. Most often these are properties with older residents who remain live in the house, even when their children move out. While there are fewer such households in Eastern Europe, in Malta, Ireland or Spain, there are an average of 5 rooms per senior! This, of course, increases the cost of housing and services associated with the operation of households. In the EU, the share of people living in unoccupied flats is 36.8%, in Slovakia it is 11.4%, the largest share of people living in unoccupied flats is in Malta (73.4) and the smallest in Romania (7.3%). (Eurostat, 2020). Beran and Franek (2018) also report that housing costs are the largest share of the cost of seniors across the EU. For more than 20% of elderly people over 65 years accounted for costs associated with housing an average of 40% of the cost of their available resources, the cost of housing has been in some Member States higher or lower than in other age groups, the higher cost of living than the average in a given Member States had seniors in the Czech Republic, Sweden, Slovakia, Germany, Denmark and, in particular, Bulgaria; lower costs were seniors in Greece, Spain, Luxembourg, Italy, the United Kingdom, Ireland and Portugal. (Eurostat, 2020).

On the other hand, the cost of seniors is related to their active life - that is, the cost of recreation, travel and other activities and services. The fact is that these costs in the context of their life cycle are predominantly made up of the costs of seniors usually up to the age of 80. In the following years, the costs related to their activities are falling. One of the areas that will affect seniors is tourism, seniors are the fastest growing group of clients and at the same time they spend more in tourism than younger holidaymakers. On average, seniors consume 10% of their pensions for recreation and culture, there are some differences between Member States across the EU, and this statistic does not show how much of the cost of this item is the savings of seniors. (Eurostat, 2020b). The structure of expenses for domestic / foreign trips depends on the size of countries. The larger ones spend more on domestic trips. Smaller for foreign ones, as their demand for tourist services is usually greater than possibilities in both quantitative and subjectively qualitative way. Increase of tourist services is not equal within the European Union and in many cases we see differences between the so-called Old Union "15" and later adopted states of the new "13" (Szajt, 2018).

The solution to the problem of the cost of housing for seniors is the development of residential neighborhoods with a focus on so-called. seniorhousing. It is actually assisted housing for seniors, which is closer to renting an apartment with certain building modifications. Such a project would provide the simple services that seniors need - cleaning, washing, simple medical operations such as measuring pressure, etc. Part of the seniorhouse may be room for a doctor who would provide services for the residents of such facilities. A similar project is being developed in Bratislava (Slovakia) - in the Petržalka district called Nesto. The

inspiration for Nesto is the European creative neighborhoods built according to the urban design principles of woonerf (in Dutch the “living street”). An interesting inspiration as places in northern Europe as Nørrebro, Södermalm, De Pijp and Tjuvholmen or nearby Vienna Naschmarkt, Berlin Kreuzberg and Karlin (Lucron Development, 2019). Rural areas right next to cities are currently attractive to older people when they consider where they will retire. These areas are emerging quickly, without sufficient development of social background and adequate services. This can be especially problematic for elderly people face a higher risk of reduced mobility, illness or social exclusion. In contrast, the urban environment can be advantageous for the elderly, especially in terms of providing better access to public transport, as well as greater choice of housing options, public and commercial services. Especially clusters appear to be currently a driving force not only for regional development but also within the new technologies development for making business in terms of cluster cooperation hence to support small and medium sized entrepreneurship in EU and its regions (Kordos, 2018a; Kordos, 2018b). Urban areas attract creative industries as well – that can contribute to social cohesion (Baculáková, 2018).

The way of living - seniorhousing could replace institutional households (social care homes, retirement homes), where at present the EU is usually a small percentage of the elderly - the most in Luxembourg, at least in Romania (Eurostat, 2020). Seniorhousing would also eliminate the problem of energy poverty, where many households do not meet current energy standards and also maintenance and high energy costs require significant financial resources and create the already mentioned high housing costs for seniors. This problem occurs in all EU Member States, naturally more in single senior households. Senior housing can be part of creative residential centers that are currently being built within the EU. It should be stressed that while most healthcare costs in the EU are covered by public social protection systems, long-term welfare and institutional care are mainly funded by the private resources of the senior or his family, so that the cost of senior housing would also be covered by private resources. New digital technologies maybe one important sources of solution to support these needs, while at the same time, offering opportunities to innovators that can successfully respond to the challenges of the silver economy. Moreover, it is hoped that these technologies will bring about the next generation of disease prevention techniques, as well as treatments that can ensure a healthy, active and productive population over the age of 50. In the context of the future Multiannual Financial Framework (MFF) for 2021-2027, social challenges, such as Ageing and Digital Health will be addressed through a variety of partnerships and financial instruments (European Commission, 2019). The age structure of the population can be a threat to the use of new technologies, which should be the main users within smart living. (Harakal'ová, 2018).

Within the EU Member States, age groups and the sex of the elderly, there are substantial income disparities in the form of pensions, even taking into account price differences, older people living in Luxembourg had incomes 6.5 times higher than those of older people living in Romania (Eurostat., 2020b). Compared to the sexes of older people (aged 65 and over), it shows that older men consistently had a higher income level than older women. This gender gap was most pronounced in Lithuania, Bulgaria and Romania, where the average income among older men was more than 20% above the income level of older women. This difference is related to differences between the incomes of women and men during their working activities.

5. Conclusion

Adequate pensions to meet basic living costs of seniors is an important prerequisite of preventing poverty in old age and keep the income of the elderly throughout retirement. On the other hand, if seniors aged 65 years have reasonable living costs for the household, they are able to create opportunities for the development of a silver economy. Financial insecurity in older age can lead to poverty and other forms of social exclusion. Insufficient income is one of the main reasons why a standard of living of older people fall below a decent level. Lack of financial resources may be combined with other factors typical of older age - such as illness, disability or fragility - to reduce the quality of life of older people. The percentage of seniors 'consumption of households' inevitable costs varies from one Member State to another, which means that they may have different consumption and demand for the opportunities of the silver economy. The cost of essential household expenses differ for seniors in old and newly acceding Member States of the EU. Expenditure increases within a single household, the percentage of households inhabited by more older women. These are the reasons that reduce the potential consumption within the silver economy and are a threat to its development.

European social policy responses need national and regional contextualisation. Simultaneously, the EU needs a sense of common purpose and a common policy framework in support of national social policies. Its aim should be to create a virtuous circle whereby both pan-European cohesion and national cohesion are enhanced (Staničková, 2018). A preventive attitude towards old age by the elderly from the age of 50 creates new opportunities for the silver economy and at the same time eliminates the future social exclusion of very old people. Preventive measures should be supported by silver economy policymakers as part of the economic development strategies of the EU Member States, so that the silver economy does not become a threat instead of an opportunity. When developing measures to create the potential of the silver economy, it is necessary to accept not only the economic specificities of EU Member States, but also gender, cultural and social.

In the context of these specifics it is difficult to define what is sufficient income for seniors which still consists largely benefit from public resources of the state. The cost of pension provision will increasingly follow the demographic trends in the EU Member States. The cost of securing this population depends on many factors, but one of the decisive factors will be to keep the elderly in as long an active life as possible. This is an opportunity for the silver economy because the cost of the active life of the elderly is largely financed from their private resources. It will be up to the governments of the EU Member States to develop economic policy frameworks so that the life of seniors is dignified and safe, so that the silver economy creates opportunities and not threats to the economies of the EU countries.

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Post-Implementation Reflection Related to the European ECMT+ Project

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Abstract

The presented article based on post-implementation evaluation being one of the project outcomes presents a crucial feedback both for the organizers of the Erasmus+ IP ECMT+ (Intensive Programme, Entrepreneurship and Communication in Multicultural Teams) involving 7 European universities. It focuses on the data collected from students' self-reflective diaries and interviews conducted in 2019 and involves the evidence related to achieving goals of the project from students' perspective. Self-reflection enables to find out students' attitudes, feelings, and also their views related to the progress they made in the area of intercultural communication, developing their specialist, and language skills, and contributes to students' becoming more autonomous, taking control of their own learning, and in this way becoming more self-motivated. The submitted comparison of Polish and German students' attitudes (remaining nationalities were involved in other articles) indicate a difference related to a various social, economic and entrepreneurial background that can be used in business education striving for European economic integration.

Keywords: communication, Erasmus+, international business project, self-reflective journals, skills

JEL Classification: A12, A23, F16, F66, I20

1. Introduction

Post-implementation is part of quality management process related to continual improvement that includes learning from past projects and making changes to improve the next project. This process is documented as an evidence that quality management practices are in use as higher education institutions have to ensure that the content of education is up-to-date providing relevant study programs, while developing learning and teaching methods to enable students to acquire needed skills (Göttlichová, 2018).

Post-implementation feedback is realized after completing part of a project to ensure whether within the ECMT project the goals set in the first two rounds were achieved and whether further improvements introduced in the third round of the project will still deliver benefit. The article presents a feedback related to the project partners from Karelia University of Applied Sciences, Joensuu (Finland), Université Jean Monnet de Saint-Etienne (France), Technische Hochschule, Wildau (Germany), University of the West of Scotland, Paisley (Scotland), VIVES University College, Kortrijk (Belgium), and Politechnika Poznańska, Poznań (Poland) The analysed data was collected from students' self-reflective diaries and interviews conducted after the intensive courses in Germany and France had been held (Heinz, Chylková and Nenička, 2018).

The programme Erasmus+ IP involved intensive two weeks of working together both of students and teachers from seven different institutions and different disciplines in order to develop their communication skills while working in multicultural workgroups on start-ups. The project was aimed at providing a hands-on experience over a ten-day period to enable all the participants to develop and reflect on the necessary skills and strategies to achieve effective communication in multicultural teams (Robinson, 2011).

The following article based on post-implementation evaluation presents a crucial feedback both for the organizers of the IPs involving 7 European tertiary institutions and for participants of the IPs. It has been proved that international encounters are beneficial although cultural, religious and linguistic diversity are, at first glance, obstacles to communication, closer study reveals that during them students learn to communicate (Ardielli, 2018).

2. Problem Formulation and Methodology

The goal of the research was to monitor, compare and evaluate students' progress from project partner universities to conduct an analysis of the acquired data based on information from self-reflective essays and interviews, and above all to recommend improvements for the possible continuation of the project in the future.

Reflective techniques help teachers to recognize patterns of thought and behaviour that shape students' thinking and actions, but especially shows how students perceive what they are learning and how they connect the new knowledge to the old one and what their attitude to that they are learning is (Zelenková, 2016).

One of the reflective methods is the learning journal, also called a diary or a self-reflective journal. Self-reflective learning diaries enable tutors to find out students' attitudes, feelings, and also their views related to the progress they made in the area of intercultural communication, developing their specialist, and language skills. Students can express themselves without fear and embarrassment, and improve their language skills (Evans, 2009).

The best option seems to be a combination of both self-reflective diaries based on a set of questions and an interview repeated in the regular intervals as well as setting for example a section of the project's website where any questions occurred can be answered immediately.

As mentioned, the IP survey used the following topics the writers of self-reflective diaries had to refer to: pre-course activities – expectation and estimation of the course content, acquired knowledge about yourself, relationship with others, personal development, innovative pedagogical methods, culture issues, impact on future life, language proficiency, especially appreciated issues, and overall evaluation.

2.1 Evaluation of German and Polish self-reflective diaries and essays

The German team consisted of 8 students of European Studies providing, in comparison with the other teams, much more detailed and enthusiastic information about the issues mentioned in the self-reflected diary and essay structure.

(1) Pre-course activities–expectation and estimation of the course content

Pre-course activities of the German team involved basic communication focusing on specific roles within the national team, which was based on their expertise. Students dealt with the PESTEL and CANVAS models, pitching ideas, creating a video, and developing three business ideas. Unfortunately, none of them was finally accepted by a multicultural team, but students found out that what had been viable in Germany, did not work in other countries. The

first contact with the international team members was made initially via the Claroline platform. However, as it needs improving, students decided to create a Whatsapp group, which was their main communication channel during the IP.

(2) Acquired knowledge about yourself

Students have reported that participation in the IP was an enlightenment about themselves showing being on the right track in terms of their university education and plans for the future. Although some issues had been taught at their home university, they acquired better understanding from a different perspective.

(3) Relationship with others

Students have appreciated most team building workshops stimulating team work creativity, solidarity, and interaction with team mates. This was the way how to develop social skills and gain a view of multicultural issues, consequently leading to networks of talented people ready for future challenges. Students have stated they missed enough time, especially before the final pitch, but on the other hand, the mentioned situation led to the improvement of time management skills. They have also learned how to provide a negative feedback to team members who did not perform their duties, which required dealing with conflict and finding a suitable way of communication.

(4) Personal development

Students have reported that practising pitching provided them with gaining confidence and being aware of their specific team roles, which helped them with identifying their strengths. They appreciated debating workshops on bringing arguments during discussions, which provided strong motivation for some of them to apply for an Erasmus exchange semester in a foreign country.

(5) Innovative pedagogical methods

Students especially liked games related to creativity in the team working. They also noticed differences between approaches of teachers coming from different culture background, e.g. failing is for the latter a usual thing, but Germans decide to found their own business only when they are convinced about their ideas as they do not want to take too much risk.

(6) Culture issues

German students considered the sessions devoted to the taste of cultures a good ice-breaker providing information about cultures. They came to the conclusion that students of other nationalities trust each other much more than the Germans do, which was surprising for German students who at the same time had an opportunity to learn information about Polish and Czech cultures.

(7) Impact on future life

Working on the IP project has proved that students selected the right line of study. One of them will be placed for the internship in Joensuu and has appreciated being praised by a jury member, which strengthened the person's self-confidence. Students could understand how communication and work were arranged in the international surroundings and they appreciated the direct feedback from businessmen, lecturers and other more experienced students as a source of valuable remarks which could be implemented into their business areas in the future.

(8) Language proficiency

The German students were able to communicate with the IP course members in three languages, but communication in English was the basic one and at the beginning of teamwork it was very difficult to find a level suitable for everyone so that all the team members were able to share decisions and make progress in the project development. The biggest challenge was related to different accents, which led to misunderstandings about tasks to be done in the team. One of the new English words seems to be an *intrapreneur*, a very innovative person being able to take risks and responsibilities and to understand the importance of motivation.

(9) Especially appreciated issues

German students showed the determination to achieve the goal. They also praised workshops on simulation games that helped them to realize how important it was to find a working environment and share responsibilities in it.

(10) Overall evaluation

The IP course has brought enrichment in many aspects including, above all, making new friends and working in a multicultural team, which seems to be challenging, but at the same time rewarding. The most significant benefit seems to be developing entrepreneurial mind set leading to an idea what kind of job to apply for in the future.

The Polish team involved 6 students – 4 females and 2 males - from University of Technology in Poznań who study Safety Engineering or Engineering Management. They had had experience in the field of organizational, managerial, creative thinking, analytical, and social skills.

(1) The Polish students did not mention any pre-course activities therefore they were not able to provide any information about their expectations related to the Erasmus+ IP course.

(2) The students' knowledge about their progress during the course refers to feeling ready to work in any team, being more open, and being aware of the facts which skills it is necessary to improve. They realize that there is not only a need of professional skills, but also soft skills, especially having an empathetic approach.

(3) Relationship with other students did not seem to be easy in the beginning as the IP course was the first international experience for the students in terms of presenting their own ideas in the team. However, the students have reported they were not involved in any conflicts and met interesting people with different culture background.

(4) The students appreciated the acquired knowledge very much, especially developing a business plan, using a canvas model and market penetration. However, the most valuable fact is gaining self-confidence in contracts and seeing how international companies work to develop a project.

(5) In terms of new teaching methods, the students declared that education in other countries was more modern and practical than in Poland. They also experienced new management skills and innovative teaching methods used by teachers. They appreciated a close cooperation with teachers and admitted that pitch presentations forced teams to develop business ideas faster and more efficiently.

(6) The Polish students stated that Czech culture seemed to be very similar to Polish culture, but it was interesting to learn new facts about other European countries and standards related to team work.

(7) The students could see big differences between Polish entrepreneurial conditions and entrepreneurship in Poland. The meeting with Finnish businessmen showed a significantly

different concept of doing business and a more positive perceiving a businessman than in Poland, which can help Polish students to be more open and acquire a professional background and the ability to use it in the future.

(8) It was reported that overcoming language and culture barriers was difficult but brought a different vision of doing business. The students acquired the knowledge of numerous new words and phrases, like for example a very popular collocation *entrepreneurial mind set*, especially in the field of business English, and had an opportunity to use them in common conversation.

(9) One of the most appreciated IP issues is connected with the local businessmen and their testimonials about their achievements and failures as well. However, the students consider the most useful developing a business plan and working with the Business Canvas Model.

(10) The Polish students evaluate the practical part of the IP course in a more positive way than lectures. The most beneficial issue seems to be discussion with motivated people, well prepared consulting activities, and the chance to work with international students.

2.2 Interviews related to the IP

Post-implementation evaluation is enriched with interviews based on the following questions:

- (1) Has participation in the IP (Intensive Programme) triggered your personal development and how has it influenced your study or your future career?
- (2) Have you had other opportunities to work in multicultural teams and how have you used experiences acquired in the IP?
- (3) What skills acquired during the IP have you been using since the course finished?
- (4) In what way has the IP course influenced your language and intercultural communication knowledge?
- (5) What was the most important lesson to learn during the IP and how can it be applied to your future study or career?
- (6) What can be improved in the IP content and structure to deliver bigger benefits in the third round?
- (7) Has the participation in the IP influence you in terms of setting up a company?
- (8) Have you been in contact with your team mates since the IP course finished? Have you worked with them on another project?

To be able to evaluate the outcomes of the project another reflective method was applied. The students having participated in the project were asked to answer structured and semi-structured questions during an interview which was held at least after a year from active involvement of students in the IP activities. The method of an interview as a method of qualitative research was chosen to obtain diverse reflection of development of students, possible change in their opinions and appraisal of skills and competencies obtained during the IP. The question formulating was the responsibility of the Czech partner.

Talking about the advantages of interviews with students in comparison to the self-reflective diaries and essays the following ones can be emphasized: The interviews were held after a longer period since the previous IP had been finished unlike writing the self-reflective diaries and the interviewees could find some other useful outcomes. Mainly because of the fact that some of them finished their studies and could gain a new point of view about the project, the

outcomes could be tested in a real-life and career. The participants were able to evaluate how the project had stimulated new possibilities, their new approach to further education.

A major disadvantage of interviews for some participants is the fact that it was too long after the IP to remember all the details.

All the students stated that their participation had triggered their personal development and their study or career. Some of them decided to choose Erasmus+ Programme and study abroad or the IP encouraged the student to participate in e-working in Estonia. The students are able to think about business and developing a business idea in a different way as well as acquiring a new attitude to marketing. The fact they have gained skills and competencies in dealing with business models is also very important. They consider the intercultural environment as very stimulating. They spoke about soft skills, teamwork, and developed empathy. The ability to listen to other opinions was mentioned in many interviews.

The students' answers differ when talking about entrepreneurship and change in their point of view about it. Students realized how important it is to be a great speaker in giving presentations to sell "your idea". They confirmed that it was very useful to see the process of establishing a company and pitching ideas as they had not had any experience of establishing a company before.

The following question about setting up a company shows different opinions as well. Some of them would like to become entrepreneurs in the future but sometimes with the help of a partner or a team. Some of them have realized that they are not the right persons for entrepreneurship.

Working in multicultural teams after the IP has not been confirmed but the students have applied some skills obtained during the IP when meeting people from different cultural environment.

When evaluating the language and intercultural communication knowledge the students emphasize the intensive influence on their language improvement, the best experience for learning the language to speak it with no two Czech students in a team, they liked this type of programmes if you can learn about the differences in mentality, culture and it was a great opportunity to get information like this. Most of the students mentioned the improvement in fluency related to speaking.

The students' recommendation for the future of the project involves a better agenda, better preparation of the pre-IP activities with some countries, sometimes shorter lectures and more workshops to practice more.

3. Problem Solution

Comparison of opinions expressed by German and Polish teams show that team members had different expectations related to the output of the IP course as they come from different culture, educational, and entrepreneurial background.

The Polish students were surprised at the big knowledge of their teammates from other countries and felt a little backward in the initial stage of the IP course. On the contrary, the Germans proved to be self-confident expressing an opinion that they had come across some topics before.

Most Polish and German team members evaluated their personal progress related to the ability to become part of the process of company establishment as well as acquisition of specific professional and social skills. Both teams appreciate the possibility of networking, but

relationship building was not easy for Polish students as the IP was the first international experience for them to present their ideas in multicultural teams.

Innovation related to teaching methods was highly appreciated by Polish students who have declared that education in other countries is more modern and practical than in Poland, but the Germans seem to be involved in innovative teaching on a daily basis. Polish students could see big differences between entrepreneurial conditions in Poland and in other countries, which helped Polish students to change their attitudes and provided them with self-confidence in starting up their own businesses.

For Polish students, it was difficult to overcome the language and culture barriers and they learnt a lot of new words and collocations while language and culture barriers were not important for the Germans, but a great benefit is that they are not afraid of using English in various situations.

Both teams criticized frequent schedule changes and agreed on the fact that the communication platform was not user friendly. They would also prefer having one coach during the whole IP course.

To summarize the comparison of Polish and German opinions, it can be stated that a certain degree the difference between Polish and German students' views is related to a different social, economic and entrepreneurial background in the mentioned countries, which is definitely connected with different historical development.

4. Conclusion

After the analysis of German and Polish students' self-reflective essays, diaries and interviews it can be stated that the Polish have made a bigger progress in numerous aspects of business education as their starting point was different from the German one. The German students seem to be accustomed to more innovative teaching methods and they also have an opportunity to work in international groups of students. Polish students could see big differences between entrepreneurial conditions in Poland and other European countries, therefore they learnt more and their attitudes have changed after the IP.

The recommendations for all the staff involved in the preparation and running the IP in the future involve improving of the communication platform, better organizing of pre-course activities, changing the system of coaching in multicultural teams as well as providing more time for working in teams.

Most Polish and German team members evaluated their personal progress related to the ability to become part of the process of company establishment as well as acquisition of specific professional and social skills. Both teams appreciate the possibility of networking, relationship building, and acquiring more confidence in speaking English in public. The outcome of the project shows that the essential pillar for economic growth can be a high-quality education, well-organized education system, as well as the effectiveness of science, research, development, and innovations developed in European projects (Palašćáková, Kol'veková and Palašćáková, 2018).

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Territorial Marketing as a Tool to Identify Opportunities for the Moderate European Innovators: The Case of the Czech Republic

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Abstract

The European Union is considered being one of the most politically and economically stable territories. The EU members play a crucial role as an engine of the world economy, and more importantly, innovation booster. As the European Union aims to be the global leader in the innovation framework, it promotes the European Innovation Scoreboard report, which comparatively assesses the innovation performance of each EU member. Admittedly, being among moderate innovators brings a tremendous opportunity to develop the territory's comparative advantage and become a significant part of the global economy. The study examines the territorial marketing concept as a tool to identify opportunities for the Czech Republic as a moderate European innovator. The paper presents the recommendation to the Czech Republic in the European environment focusing on the opportunities to grow a stronger territory. One of the main advantages of territorial marketing is to create an attractive and sustainable territory for investors, residents, potential enterprises, regardless of territory size.

Keywords: Czech Republic, European innovation scoreboard, European Union, innovation, territorial marketing

JEL Classification: M31, O18, O31, R11, R58

1. Introduction

Although the globalization process brings opportunities, here comes the time for how to handle global information overload. The European Union institutions internally aim to up to the hilt from the process of globalization for its stakeholders, as well as to decrease the threats in its environment. The Member States play a meaningful role as an engine of the world economy; hence it comes with increased economic competition for the territories, regardless of size. Besides the positive impacts of globalization, the long-term process grows the gap between successful and unsuccessful locations in the entire world. The competitive environment has widened its strides both in the microeconomics and macroeconomics environment. Considering the fact, the companies should follow a complex strategic vision in order to bring a competitive advantage on the market, one of the ways how to become a competent partner is the awareness of the importance of the innovation process and its strategy. Nowadays, countries following the research, innovation, and technology strategy belong among the most well-to-do unities. Even though the Czech Republic has excellent preconditions to become a part of these units, regrettably, it has not converted into such a predator yet.

The paper explores the territorial marketing concept as a tool to identify opportunities for the Czech Republic as a moderate European innovator. Further, it presents the recommendation to the Czech Republic in the European environment focusing on the opportunities to grow a more substantial territory.

2. Territorial Marketing within the European Environment

Each Member State differs in terms of the size of the territory, GDP and its growth, employment share, and more importantly, population size. Regardless of the indicators, each state ought to be prepared for becoming a competitive part of the global market. Particularly during the globalization process, any small territory may be able to compete with others on a global scale. As follows, the concept of territorial marketing may be applied at any level of countries, regions, cities, or districts. Admittedly, this concept is not easily measured; nevertheless, if it is implemented correctly, preferably vertically, then its benefits are tremendous in the long-term period.

2.1 European Innovation Scoreboard Report

As the European Union aims to persist as the most politically and economically stable territory, it follows the complex strategy of taking the lead in the global research and innovation field. Among many competitive advantages based in the economic sphere, the European Commission provides the European Innovation Scoreboard (EIS) that relatively assesses the innovation performance of each Member State and regional neighbours. Generally, the scoreboard brings comparable strengths, opportunities, weaknesses, and threats to the national innovation systems. For this paper, there will be used data from the European Innovation Scoreboard released on 17 June 2019, and Regional Innovation Scoreboard issued the same day (European Commission, 2019). Significantly, the European Commission presents (2019a) the overall scoreboard as “*the most ambitious research and innovation program ever*,” which belongs among formidable projects concerning innovation expertise and future national investments (Trott, 2008). According to the EIS, the innovation performance has increased for the entire EU territory by 8.8 percentage points since 2011. It overtook the locations such as the United States of America, China, Russia, and others in the year of 2018. Besides, the EU continues to fall behind Japan, Australia, Canada, and South Korea (European Commission, 2019a).

According to the EIS scores, EU countries fall into four performance groups (1) innovation leaders which present countries with 20% or more above the EU average, (2) strong innovators including states which are above or close to the EU average, further (3) moderate innovators indicating below the EU average countries, finally (4) modest innovators performing below 50% of the EU average countries. For better illustration, see Table 1 that represents the most significant members of each group in 2018 (European Commission, 2019).

Table 1: European Innovation Scoreboard Performance Groups in 2018

Innovation Leaders	Denmark, Finland, Netherlands, Sweden
Strong Innovators	Austria, Belgium, Estonia, France, Germany, Ireland, Luxembourg, United Kingdom
Moderate Innovators	Croatia, Cyprus, Czech Republic , Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Spain
Modest Innovators	Bulgaria, Romania

Source: European Commission (2019a)

In 2018, the countries were ranked based on statistical cluster analysis. The methodology differentiates between the following types of indicators, firstly (1) Human Resources showing new doctorate graduates, population with tertiary education, and lifelong learning, (2) Attractive Research Systems involving international scientific co-publications, most cited publications, and foreign doctorate students, (3) Innovation-friendly Environment displaying broadband penetration and opportunity-driven entrepreneurship, (4) Finance and Support characterizing R&D expenditure in the public sector and venture capital expenditures, (5) Firm Investments reporting R&D expenditure in the business sector, non-R&D innovation expenditures, and enterprises providing ICT training, moreover (6) Innovators defining SMEs product/process innovations, SMEs marketing/organizational innovations, and SMEs innovation in-house, (7) Linkages composed of innovative SMEs collaboration with other, public-private co-publications, and private co-funding of public R&D expenditure, following (8) Intellectual assets listing PCT patent applications, trademark applications, and design application, (9) Employment impacts presenting employment in knowledge-intensive activities, and employment fast-growing enterprises, finally (10) Sales impacts naming medium and high-tech product exports, knowledge-intensive services exports, and sales of new-to-market/firm innovations (European Commission, 2019). There another four economic indicators which will not be considered in this paper, nevertheless, it produces an opportunity for future research, particularly, (11) Performance and structure of the economy, (12) Business and entrepreneurship, (13) Governance and policy framework, last but not least (14) Demography (European Commission, 2019; 2019a).

2.2 Territorial Marketing

The introduction of the main idea of the concept of territorial marketing began in the 19th century, nevertheless, only at the municipal level (Cudny, 2019). The expansion spread throughout the American environment slowly to Europe up to Russia during the second half of the 20th century on a massive scale (Bagautdinova, Gafurov, Kalenskaya, Novenkova, 2012). The idea understands a territory as a product that profits from local businesses, organizations, activities, technology, and innovations. More importantly, the concept proposes to develop the territory's competitive advantages and embrace its uniqueness over other competitors. The importance of integration of the concept into the strategic planning of a particular territory is crucial; however, there are not many types of research and studies on this topic. Nevertheless, Kotler, Haider, and Rein in their book (2002), as well as pieces of research written by Muñiz (2012), and Dinis (2004) agrees on the fact that one way of how to convert into a prosperous member at the market, particularly territorial market, is to define, build, develop, and strengthen the competitive advantage. Additionally, another proposal is to interconnect the target group and the territory emotionally based on individuals' experience.

In the first place, Āzena a Keišs (2009) distinguished four main target groups within the concept (1) citizens, (2) businesses and organizations, (3) tourists and visitors, finally (4) export of good and services. Nevertheless, each of these groups varies in its interests and expectations; with this in mind, a defined territory should follow its unique approach. Besides, Desbordes, Aymar, and Hautbois (2019) recognize the target groups as a society formed of businesses, families, and tourists. Another critical point comes from Barysheva and Kashchuk (2015), who distinguish territorial marketing categorized by age and gender. Most significantly, Porter in Harvard Business Review (1998) determines the group of potential investors attracted in the location, regardless of the intention. At this point, the critical connection of territorial marketing and European Innovation Scoreboard explicitly follows the common purpose; to attract potential investors into the territory. The process of bringing new investors takes the opportunity to improve the entire territory. In essence, sophisticated

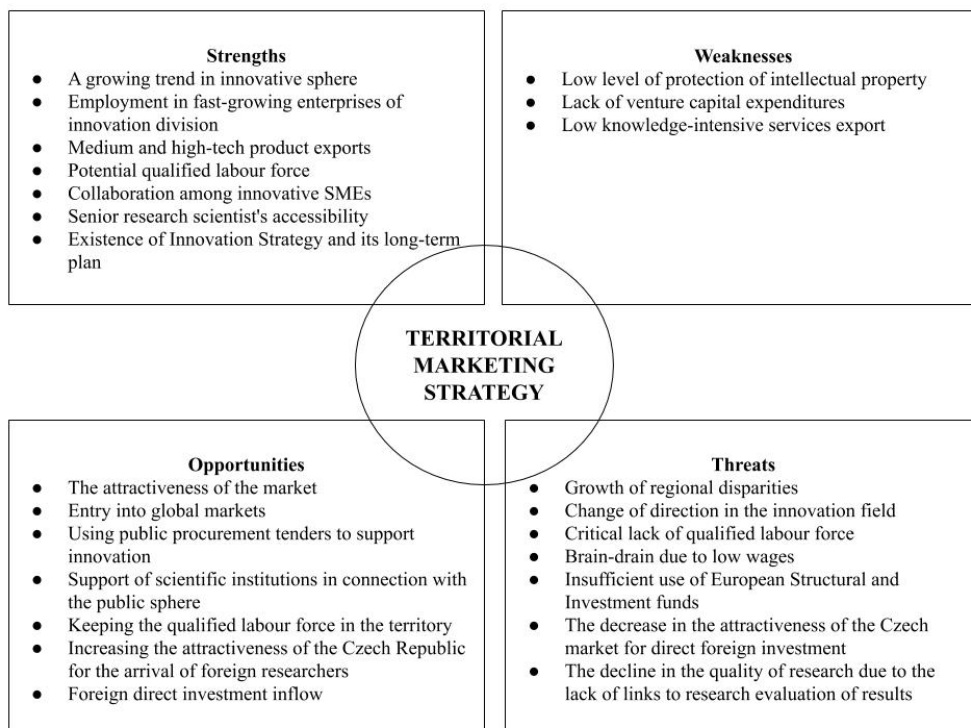
territorial marketing can be understood as a political, commercial, and social activity based on the theory and principles of traditional marketing primarily conducted to create the value of a particular territory and to form the relationship of the target groups.

Generally speaking, each territory presents its vision, mission, and goals that reflect the current demands and needs of the stakeholders. To introduce globally accepted goals, here are some (1) Building the value and identity of the territory, (2) Improving the quality of life of its citizens, (3) Benefits of internal and external investments, (4) Promoting the environment in their neighbourhood, (5) Contribution of quality and long-term labour force, (6) Implementation and application of local and cultural events and programs, most importantly (7) Finding potential investors to develop the territory.

3. Territorial Marketing as an Opportunity for the Czech Republic

The fields of research, innovation, and technology progress in the Czech Republic are perceived very positively from the public perspective. These disciplines not only bring a tremendous opportunity for future investments into the country but also improve the quality of life of the stakeholders and target groups. As mentioned above, the expanding globalization comes with the rapid change of a constant situation; as the markets must promptly react to the current demand also any territory should strengthen its competitive advantage (Dinis, 2004). Recently, with the advantage of the fast spread of public news, the Czech Republic seems to be doing well in the technology, research, and innovation fields. Nevertheless, the European Innovation Scoreboard (European Commission, 2019) classifies the Czech Republic as a Moderate Innovator, which is ranked among below the EU average countries. Likewise, Davies, Iootty, and Zouhar supported by World Bank Group (2019) acknowledge that the innovation process in the Czech Republic is slow and grows the gap among the industries. Comparatively, Urbancová and Vrabcová concluded from their research (2019) the prosper innovation integration brings not only external advantages but also internal challenges which lead to the quality life of the employers and employees.

Despite the small size of the area, the Czech Republic has become a sustainable territory over time. Its long-term strategy to get closer to the Western countries forms its mission and vision. With this in mind, the opportunity to aim into the higher group, expressly Strong Innovators, is desirable. Among the most long-term and effective ways how to achieve such an accomplishment would be precisely the concept of territorial marketing. As other cities and regions in the Western world outside the Communist bloc began to promote the attractiveness of the territory as early as the 1980s (Ježek, 2010), the Czech Republic, as an independent state, had as its priority to integrate the nation and the internal economy. I believe the EIS report brings a great opportunity and a proposal of strategy to develop the territory's competitive advantage and grow into a significant part of the global economy. Despite vast ambition, the Czech Republic was classified as a Moderate Innovator based on its innovation potential in 2018. Within the regions, Praha (CZ01) is an exception, which belongs to the group of Strong Innovators, other regions remain as Moderate Innovators. In order to identify the opportunities for the Czech Republic to grow a more substantial territory, there is formed SWOT analysis that is uniquely useful while assessing more indicators (Jakubíková, 2008). SWOT method provides a structure for interpreting the internal strengths and weaknesses of the territory, as well as external opportunities and threats. It is not only a tool of how to present the contemporary perspective of the situation, but also it provides the overall strategic plan (Pahl, Richter, 2009; Ventura, 2014).

Figure 1: SWOT Analysis of EIS Indicators within the Concept of Territorial Marketing

Source: Adapted and modified based on the EIS data (European Commission, 2019) and Dinis (2004)

Figure 1 summarizes the weaknesses, strengths, opportunities and threats in the Czech Republic in the field of innovation within the concept of territorial marketing. The competitive advantage advances mainly in firm investments, employment impacts, human resource, sales impacts, and innovators performance. On the contrary, the relative weaknesses are finance and support performance index, intellectual assets, and knowledge-intensive services exports within the concept of territorial marketing. Among the strengths of the Czech innovation environment, there are (1) R&D expenditure in the public sector, as well as (2) R&D expenditure in the business sector, (3) employment fast-growing enterprises, (4) medium and high-tech product exports, (5) innovative SMEs collaborating with others, (6) potential qualified labour force, more importantly, (7) a growing trend in the innovative sphere. On the contrary, in terms of (1) knowledge-intensive services exports, (2) PCT patent applications, (3) lack of connection of venture capital expenditures with private capital, indicate below-average values.

The accessibility of highly qualified and educated people is one of the essential stimulators of territorial marketing. Consideration should be given to how to motivate the students to continue and, in particular, complete PhD studies. Generally, the most important entities that carry out research and development in the Czech Republic in the government and higher education sectors are public universities and public research institutions. Lately, information and communication technologies are an essential part of everyday life. So, it is no wonder there is a growing need for specialists, especially young generations, to develop and innovate them (Badulescu, Perticas, Hatos, Csintalan, 2018).

As SWOT analysis defined the strengths and opportunities of the Czech Republic, there might raise the question of what are the advantages of getting up to the level Strong Innovators. From the perspective of territorial marketing, it may bring a massive amount of investment, direct support instruments, particularly subsidies and grants into the territory. Being among Strong Innovators would help to the territory to attract potential investors and innovative companies. Lichtenthaler in his research (2018) creates a list of a meta ranking of the most innovative companies where the top ten companies are Amazon, Apple, Tencent, Google, Netflix, SpaceX, Tesla, Microsoft, IBM. Most of these companies are not yet based in the Czech Republic as they are mainly US-based; however, Google, Microsoft, and IBM are developing its structure already in the Czech Republic. These companies are not only a financial opportunity for the country, but also it brings and keeps a human resource in the territory. Having innovative and quality innovators in the country will help us to make the territory more attractive towards the target groups; that is the primary mission of the concept of territorial marketing. Lately, in the Czech Republic, there is a growing number of technology companies that have been successful in the international markets (Musteen, Datta, Butts, 2014). It is the investments that open the way for companies to innovate. However, the situation of small and medium-sized enterprises lack financial, personnel resources and know-how, but the existence of certain administrative burdens.

To compare, Estonia, previously Moderate Innovator, joins the group of Strong Innovators in 2018. Its performance relative indicators have changed over time, mainly (1) human resources, particularly population with tertiary education and lifelong learning, further (2) attractive research systems as a whole group, (3) venture capital expenditures have risen rapidly, (4) innovative SMEs collaborating with others, lastly (5) non-R&D innovation expenditures (European Commission, 2019). All of these indicators will improve the attractiveness of the country. In comparison with the Czech Republic, these indicators contribute to sustainable territorial marketing and get closer to its mission.

In conclusion, the opportunity to grow as a more definite territory and shift into higher group Strong Innovators would be very desirable and beneficial for the Czech Republic. Research, innovation, and technology fields belong among many other indicators of how to increase the competitive advantage of the Czech Republic, both in the business and public administration (Czupich, 2018). Bagautdinova, Gafurov, Kalenskaya, and Novenkova in their study in the case of Russia (2012) further describe how innovation may positively affect the quality life of the inhabitants, as well as improve the current situation of the disadvantaged population. Furthermore, they admit the power of the concept of territorial marketing; they also admit the public authorities do not explicitly believe in this tool which leaves the country without extra foreign investments that could help to develop the territory. Given this point, according to the EIS, Russia ranks below EU average; the worst-ranked countries are only India and South Africa (European Commission, 2019; 2019a).

4. Conclusion

Both the European Union and the Czech Republic are aware of the significance of the fields of research, innovation, and technology in their economies. For the increasing demand, the European Union reacts with publishing the report European Innovative Scoreboard (EIS) that comparatively assesses the innovation performance of each Member State and regional neighbours. The EIS ranks the Czech Republic among Moderate Innovator, yet its potential aims higher. Even though the Czech Republic is a small country whose production resources are limited; therefore, the area of research, development and innovation is crucial for its future economic development. Needless to say, another part of the success of the Czech economy is followed by the official Export Strategy. Positively, the Strategy indicates the recent success

in export, especially high-end products and the progression of innovation need (Ministry of industry and trade, 2019).

To get into a higher group, expressly Strong Innovators, the concept of territorial marketing would be very desirable. The concept primary aims to improve the territory's competitive advantage and to strengthen its uniqueness and identity. If territorial marketing is done sustainably in the long-term period, it brings the benefits, particularly, foreign direct investments, qualified labour force, and satisfied inhabitants. All these benefits, however, come precisely from the uniqueness of the territory. So, if the Czech Republic improves the lacks in the innovation field, it may become a more attractive place to live and work in. Within the framework of regional development, the concept has an influential role. As Kotler and Lane (2013) stressed the importance of marketing as a field itself; territorial marketing is one of the most effective ways and above all of the tools to make a location more attractive, regardless of size. Nevertheless, the global rule of success applies: think globally, but act locally. The future research concerning this topic will be oriented into each Member States successful techniques within the concept of territorial marketing. The outcome will help to other territories to identify, implement, develop, and sustain this tool in order to make any place more attractive for the stakeholders and target groups.

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Tax Rulings Practice of the Member States under Scrutiny of the EU State Aid Rules

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Abstract

The paper deals with the current developments in the assessment of tax rulings of the Member States in terms of their compatibility with the rules of European Union State aid. With the re-elected Commissioner for competition, the promotion of a level playing field and protection of fair competition in the internal market will continue to play a central role in the agenda of the new Commission. The paper focuses on the ongoing cases of Apple, Starbucks, Fiat and other multinational companies who, according to the Commission, have been granted an unjustified selective advantage. This advantage consists in the issuance of tax rulings containing advance pricing agreements. On this background, it analyses the arguments of the Commission in its decisions and puts them in context with first judgments of the EU General Court, whereas the notion of “arm’s length principle” and its application in these cases is pivotal to assessing the legitimacy of the Commission’s action against these multinationals. The paper concludes with a partially critical assessment of the Commission’s approach.

Keywords: arm’s length principle, state aid, tax ruling, transfer pricing

JEL Classification: K21, K33, K34

1. Introduction

The primary objective of European Union state aid rules is not establishing an absolute prohibition on the use of any aid, but only a selection of the range of these measures which is subject to testing for their possible negative impact on competition in the internal market (Podsiadło, 2016). In other words, EU state aid rules are intended to maintain undistorted competition in the internal market.

Although the area of direct taxation remains a matter of sovereign rights of Member States (contrary to indirect taxation, which is harmonized), tax measures of Member States are not excluded from the scope of EU state aid rules.

The paper focuses on the assessment of tax rulings of Member States containing advance pricing agreements from the perspective of EU state aid rules. Individual cases deal with state aid given to multinationals like Apple, Amazon or Starbucks, which has the effect of reducing their tax liability. This issue is part of a wider international development in the field of combating harmful tax competition. We can observe a more active approach against aggressive tax planning by multinational companies, since the initiation of the G20/OECD Base Erosion Profit Shifting (“BEPS”) project in 2012 (Vos, 2018).

The aim of this paper is to analyse and review the arguments of the Commission in the cases of tax rulings to multinationals and to come to an answer to question of the potential impacts

of the efforts of the Commission on the internal market and implicitly on international taxation. The paper notes that the applicability and interpretation of the arm's length principle is central to the success or failure of the Commission.

2. Tax Measures of the Member States and State Aid

The assessment of Member States' tax measures (mainly in the form of tax schemes) in the light of EU state aid rules has been a common practice of the Commission for several years (e.g. *Banco Santander* or *World Duty Free Group* cases from the recent past). Since 2013, the Commission has focused its investigations on a specific type of these measures, namely individual tax measures, i.e. "tax rulings". The Commission opened formal investigations into tax rulings of all Member States through which multinationals could be granted a selective economic advantage. Most of these tax rulings included transfer pricing arrangements within multinationals.

In the case of Ireland (Apple), the Netherlands (Starbucks), Luxembourg (Amazon, Fiat Finance & Trade, Engie) and Belgium (Excess Profit Exemption), the Commission decided that these tax rulings constitute an illegal state aid by conferring a selective economic advantage. While the above-mentioned cases will be reviewed by the Court of Justice of the European Union ("CJEU"), some other cases are still under investigation of the Commission (e.g. Inter IKEA, Nike, Huhtamäki).

2.1 Tax Rulings and Transfer Prices

According to the Commission, the purpose of a tax ruling is to establish in advance the application of the ordinary tax system to a particular case in view of its specific facts and circumstances (European Commission [online], 2016). By determining the way in which national tax laws or international treaties are applied in a specific case, these tax rulings contribute to reducing legal uncertainty and unpredictability of tax administration.

Tax rulings containing transfer pricing arrangements (also called "Advance Pricing Agreements", hereinafter "APAs") are concluded between a tax authority and a specific taxpayer, in current cases it concerns multinationals that are active in more jurisdictions. APAs themselves do not constitute state aid, on the contrary they generally have a positive impact on tax administration and contribute to the avoidance of potential double taxation (Iliopoulos, 2017).

These APAs concern the confirmation of the method of transfer pricing. Transfer prices are prices that apply to transactions between associated undertakings (i.e. undertakings from the same group, usually operating in different jurisdictions). However, transfer pricing between associated undertakings may be exploitable. Intragroup transactions may not always be conducted under market conditions. In order to reduce tax burden or to completely avoid tax liability, profits may be shifted between associated undertakings in different jurisdictions.

For this purpose, the so-called arm's length principle has been introduced.

2.2 Arm's Length Principle

The arm's length principle was initially included in double taxation treaties between different states until it was later adopted at OECD level. The meaning of this principle is that transactions are made at arm's length if they are realised between associated undertakings at prices determined in the way that separate companies would have done under normal market

conditions. This principle is closely related to the rule that companies which are part of a (multinational) group must be considered as separate entities.

3. APAs – Commission Decisions and Judgments of the CJEU

In order for any measure to constitute state aid, the following criteria must be cumulatively met according to Article 107(1) of the Treaty on the Functioning of the European Union: first, the measure must be granted by the State or through State resources; second, it must distort or threaten to distort competition; third, it must be liable to affect trade between Member States and fourth the measure must confer a selective advantage on an undertaking.

The Commission carried out this assessment also in the case of tax rulings with a clear emphasis on their potential selectivity.

3.1 Analysis of the Commission Decisions on Tax Rulings

In tax matters, the fulfilment of the first criterion is usually presumed, because tax authorities exercise the power of the State in this area. Tax rulings constitute a reduction of tax liability of the beneficiaries and thus a loss of State resources (e.g. European Commission [online], 2018, recital 221; 2015a, recital 225; 2015b, recital 187).

Concerning the second and third criterion, the Commission briefly stated that since multinationals operate in all EU Member States, any aid to them distorts or threatens to distort competition and may affect trade between Member States (Ibid., recitals 222, 188 and 226).

As regards the criterion of a selective advantage, in all the above-mentioned cases, the Commission considered that APAs did not comply with the arm's length principle. This means that these tax rulings have reduced the tax burden of these multinationals, granting them an economic advantage (Ibid., recital 223). For instance, the Commission in *Apple* case noted that this advantage is selective in nature, as multinationals were granted individual aid, as opposed to a scheme of aid (European Commission [online], 2018, recital 224). Therefore, according to the Commission there was no need to carry out the so-called three-step analysis to determine the selectivity of the tax ruling in question. In contrast, in the other cases the Commission carried out the standard three-step analysis (e.g. European Commission [online], 2015a, recitals 229 ff; 2015b, recitals 191 ff).

The three-step analysis consists of the following steps:

1. Determination of the reference system

Reference system is a general tax regime applied in a Member State, which consists of a set of rules applicable based on objective criteria to all undertakings in its scope (European Commission [online], 2016). The Commission in tax rulings cases considers the general corporate income tax system as the reference system. The Commission justifies this by stating that separate undertakings are in a factual and legal situation comparable to those which are part of the group. The reason is that corporate tax systems of Member States in question do not distinguish between integrated and non-integrated undertakings regardless of their tax residence (e.g. European Commission [online], 2018, recitals 228 and 229; 2015b, recital 194).

2. Determination whether the measure in question constitutes a derogation from that reference system

Consequently, it is examined whether the measure at issue distinguishes between undertakings in a comparable factual and legal situation in the light of the objective pursued by that system

(European Commission [online], 2016). The Commission in *Apple* case found that the tax authority exercised discretion in issuing the tax ruling which established tax liability of Apple company and the methodology for determining the amount of transfer prices. The tax ruling in question was according to the Commission contrary to the arm's length principle and thus constitutes a derogation from the reference system (European Commission [online], 2018, recitals 361 ff).

3. If a derogation is found, assessment whether it is justified

In case a derogation is found, the measure in question is considered *prima facie* selective and it must be assessed whether that measure is justified by the nature or by general scheme of the system (European Commission [online], 2016). This was not proven in any of the cases at issue. The Commission in *Apple* case refused the arguments of the company and Irish government that the tax administration's discretion when issuing the tax ruling is inherent in the Irish corporate tax system. Failure to demonstrate the use of discretion based on objective criteria was perceived as a fundamental deficiency. (European Commission [online], 2018, recital 407).

A closer look at the Commission's decisions on these tax rulings calls for a reflection on two controversial points in the Commission's arguments.

1. Correct identification of the reference system?

The Commission's conclusions that the reference system is the general corporate tax system and that the separate companies are in a comparable factual and legal situation *vis-à-vis* the companies belonging to a group raise doubts. The fact is that transfer pricing cannot be used by independent companies by nature, and thus transactions between independent companies and companies that are part of the group cannot be compared. In addition, account should be taken of the fact that guidelines have been developed at the OECD which deal specifically with transfer pricing and may therefore lead to the opposite conclusion (Verhagen, 2017).

2. Limits of applicability of the arm's length principle?

The first problem of application of this principle in the Commission's decisions is, that the principle has not yet been upheld by the case-law of the CJEU. Secondly, it is doubtful whether the application of the principle by the Commission is desirable where that principle is not enshrined in national law. Unlike other cases, in the case of *Apple*, the arm's length principle was not part of the national tax system. It can therefore be argued that in this case this principle cannot be applied in determining the derogation from the reference system (Cachia, 2017). Moreover, this principle is not even a rule of international law, so no Member State is obliged to implement this principle in its national law (Gormsen, 2016).

3.2 First Judgments of the EU General Court

In all the above-mentioned cases, actions for annulment of the Commission's decisions were brought. In February 2019 the EU General Court in the joined cases T-131/16 and T-263/16 *Belgium and Magnetrol International v. Commission* annulled the Commission's decision on Belgian Excess Profit Exemption without addressing the substance of the case.

In September 2019 the EU General Court ruled on other two cases. While in the joined cases T-760/15 and T-636/16 *Netherlands and Starbucks v. Commission* the EU General Court annulled the Commission decision, in the joined cases T-755/15 and T-759/15 *Luxembourg and Fiat Chrysler Finance Europe v. Commission* it upheld the Commission decision.

These two judgments, albeit with different conclusions, gave rise to the following findings, which may be pivotal to the rest of pending cases at issue.

Firstly, the EU General Court reconfirmed the settled case-law that Member States are sovereign in the field of direct taxation but must also respect EU law in the area of state aid (*Starbucks v. Commission*, para 142; *Fiat v. Commission*, para 104).

And secondly, the EU General Court stated that the Commission was right to use the arm's length principle as a "tool" (or "benchmark") in assessing whether tax measures constitute a selective advantage (*Starbucks v. Commission*, paras 151, 163 and 164; *Fiat v. Commission*, paras 143, 151 and 152). However, the Court imposed a condition for the application of this principle, according to which a Member State must not distinguish between integrated and non-integrated undertakings in its corporate tax system and therefore profits from intragroup transactions are taxed as if they were made under market conditions. Thus, this principle is not required to be explicitly enshrined in the law of a Member State (*Ibid.*).

However, these conclusions can be viewed as controversial for two reasons. To begin with, as mentioned above, there is no arm's length principle enshrined in EU law and yet according to the EU General Court Member States should apply this principle whether it is, or it is not enshrined in national law. It is questionable whether this does not interfere with Member States' sovereignty in the field of direct taxation. In addition, the Court did not use this opportunity to examine the application of this principle more in detail. This notable task is left to the higher instance.

Furthermore, legal certainty may suffer the most because taxpayers will not be sure if any tax ruling will be reviewed and potentially changed by the Commission (Parada, 2019). It should be emphasized that legal certainty for taxpayers is one of the main advantages of APAs (Cachia, 2017). The question thus remains whether it is right to give priority to combating harmful tax competition at the expense of legal certainty and at what cost.

4. Conclusion

The Commission's current initiative on tax rulings for multinationals and transfer pricing is another step towards protecting competition in the internal market, going beyond to combating harmful tax competition.

This initiative can be considered controversial for two reasons. The first is that the Commission uses the EU version of arm's length principle, which is not yet known to EU law or has been supported by the CJEU case-law. The second is that this activity of the Commission may be another test for the already broad concept of EU state aid according to Article 107(1) of the Treaty on the Functioning of the European Union and selectivity criterion and thus it leads to disputes as to whether this would interfere with the sovereignty of Member States.

The Commission's decisions on tax rulings will be subject to review of the CJEU and its task will be bringing the desired legal certainty in this area.

In fact, the Commission's efforts may ultimately bring more harm than good in the field of international taxation.

The direction of the author's further research will focus on the effort to find a system in the relatively chaotic and non-conceptual application of EU state aid rules in the area of Member States' tax measures by the Commission and the CJEU.

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Brexit: Difficult Leaving the EU, Illusion of Democracy in the EU and Risk of EU Disintegration

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Abstract

The article deals with analysis of the Brexit process from a time of the successful referendum on the withdrawing of the UK from the EU performed in June of 2016, with some key aspects and problems of this process, as well as with some main obstacles which were and have been still connected with it. Notwithstanding seemingly simple formulation of Article 50 in the Lisbon Treaty on the EU on possible withdrawal from the Union, the very process of leaving the Union turns out to be extraordinarily arduous and complicated. The final phase of Brexit, initiated after Parliamentary elections in the UK at the end of 2019 by a new British government, significantly accelerated this divorce suit and, at the same time, has raised some new principal issues. As the Brexit transition period was unfolded, it has challenged political and constitutional institutions and the current talks need to take into account: the consequences of Brexit on the UK and EU, their future mutual relations and the possible strengthening of some aspects of democracy deficit and Euro-scepticism.

Key words: Brexit, consequences of Brexit, democracy deficit, EU, European Scepticism, politico-legislative process, UK

JEL Classification: F15, K49, P17

1. Introduction

The European project is the most advanced example of regional integration however the United Kingdom's exit from the European Union (EU) has meant an end to this tendency. Britain's exit (Brexit) is indeed the first step backward in the EU expansion. This is an unprecedented event raising hitherto foggy issues and challenges both for the United Kingdom (UK) and the Union.

Brexit was originally recognized by the successful referendum on 23 June 2016 and its continuation was in hands of new post-referendum British Government. It is an outgoing process that not only challenges the British and European institutions, but also explores the position of the UK in Europe and its relations with the EU in the future. Thus, Brexit has raised political, economic and social questions whose outcome remains to be determined while negotiations are being held. If this process raises many uncertainties, the British withdrawal appears to be a turning point for the UK and Union.

Brexit has become one of the top-priority cases in the EU and we can wonder how it has evolved since its announcement. Moreover, Brexit created some new issues on a European level but enters also into consideration questions peculiar to the UK such as the claim for the

Scotland's independency declared by the present regional government represented by the Scottish National Party (SNP).

Brexit has really revealed a turning point both for the UK and the EU. The article judges complexities in politico-legislative process within Brexit, some aspects of democracy deficit and European Scepticism (Euro-scepticism) going along with Brexit and its transitional period, possible continuation of the disintegration process at the European level caused by Britain's withdrawal from the EU and its possible consequences on the UK and Union and on their future mutual relations. One of the main goals of the article is also to contribute to the new all-European debate on the future of the EU-27 which was announced by the European Commission in January 2020 and shall be opened in the May 2020.

2. Brexit in the Politico-Legislative Context

The British exit from the EU has been a slow and complicated politico-legislative process. The issue of this legal process occurred both within the UK institutions and on the negotiations with the EU. Furthermore, it questioned not only the withdrawal of the UK from the Union but also the future relationship between the country and the EU post-Brexit. To understand the Brexit politico-legislative process, it is necessary at first clarify some main issues and their aspects.

The Brexit originated from David Cameron's 2013 Bloomberg speech where he promised a referendum on whether the UK should remain or leave the EU. The victory of the Brexiters on June 23, 2016 by 51.9% for a 72.2% turnout led to the Prime Minister's resignation and to the British Government led by Theresa May being under an obligation to apply the referendum result. However, the expression of the will of British people was not enough to initiate the exit process. Indeed, the withdrawal of any Member State from the EU is ruled by Article 50 of the Treaty on the EU (TEU) in Lisbon wording. This article was invoked for the first time within the EU history, and gives the possibility to any Member to quit the EU "*according to its own constitutional requirements*" (European Union, 2007). It states that a Member State shall notify the Union and start negotiations for the withdrawal and future relationship between the corresponding Member leaving and the Union. The two years transition period is allowed to find an agreement and the deal must be accepted by a qualified majority voting of the European Council (i.e. in the case of the UK: 16 Member States from the 27 ones with 65% of the Union's population) but can be vetoed by the European Parliament. Article 50 TEU is therefore the main and key legal basis for the Brexit. However, the bare activation of the article became a legal challenge within the UK.

In January 2017, the British Supreme Court ruled that "*the Government cannot activate the Article 50 TEU on its own accord, despite the referendum result, and needs to consult and obtain the agreement of the British Parliament*" (R. Miller et al., 2017). In accordance with this ruling, the corresponding bill of the UK's withdrawal was presented to the Parliament and the Members of Parliament (MPs) approved it in March 2017. The notification of withdrawal was then sent on 29 March 2017 by Teresa May's Government to the European Council's Head Donald Tusk and acted as the first official step of Brexit.

Also, the day after the notification was sent, the British Parliament introduced its EU (withdrawal) bill - also called *Great Repeal bill* - meant to revoke the 1972 European Communities act. This legal act has been considered as one of the most important and challenging steps carried out by British MPs.

Moreover, Brexit has opened a new kind of negotiations and unprecedented politico-legislative process within the EU. After receiving the British notification, the 27 remaining states reunited

on 29 April 2017 to discuss Brexit for the first time and the currently on-going negotiations officially opened on June 19th. The talks were held for one week every month with the representatives of both sides – the EU and UK – with the deadline to find an agreement to 29 March 2019. If all agreement's issues were not agreed, there was a possibility to extend this negotiation period.

More than six months after the start of the talks, the first stage of the negotiations – regarding the main separation issues – was officially settled just before the end of 2017. Indeed, for the EU, before any discussions could be made on the future agreement, the question of the exit and some specific points needed to be settled. It concerned especially the rights of the UK and EU citizens, the “divorce bill” and the UK obligations towards the EU as well as the Northern Ireland border. The question of the UK and EU citizens' rights has illustrated the legal challenges faced in those negotiations. Brexit posed a very concrete question for EU citizens living in the UK and UK citizens living in other Member States of the Union. It has questioned freedom of movement first but also the rights associated to EU citizenship, competent jurisdictions in case of legal disputes and a role of the Court of Justice of the Union in the post-Brexit period. On the Northern-Ireland border issue, the question of “regulatory alignment” wanted by Ireland and the EU, as to preserve the peace and stability in the region, has been accepted and recognized by the British Government but has been challenged by the Democratic Unionist Party representatives and contested by the hard-Brexiteers within the UK. It raised the possibility of Brexit bit by bit with exemptions for the different countries and territories within the UK. (Birkinshaw, 2018) Although some sensitive aspects were not been entirely and clearly resolved, the EU considered on 8 September 2017 that sufficient progress had been made as to progress on the second stage of the negotiations and an accord was reached in principle, recognized by the European Parliament on 13 December 2017. Moreover, the British Government stated that this agreement is conditioned to the success of the future deal between the UK and EU and in a joint statement (from 8 December 2017) both sides agreed that “nothing is agreed until everything is agreed”. This second phase of the talks was described as the most challenging and concerned especially the possibility of a possible two years transition period, the commercial relations and the cooperation on security issues. This phase should also determine the orientation to the British leaving towards actual soft or hard Brexit. The British Government line on the question has been evolving on the European and national stages. If the issue remains dependent on internal and political questions, the UK's Prime Minister T. May expressed on 22 September 2017 that the UK will do its best keeping the idea that no deal may be actually better than a bad deal. The idea was developed because the UK requires special relationship with the EU and therefore needs a unique and new kind of deal. However, it could appear as a treatment favour what the EU may not agree with. Moreover, to have access to the advantages to the EU, the UK would still need to contribute to the EU budget and obligation in parts. This asks how relevant Brexit would be in a configuration where the UK would be engaged towards the EU but with no representation and voice within its institutions. And this is probably not real.

During the whole time, the Brexit process in the UK's Parliament was very strongly blocked mainly by the main opposition party – the Labour Party. Labours have behaved very strangely and always declared its support for Brexit, but only on the basis of an agreement signed between the UK and the EU (though such an agreement can be signed within the transition period after Brexit). The Labour Party refused all proposals of the agreement in the British Parliament and never submitted any own version of the agreement, nor its own conception of such the agreement.

The deadline for Brexit was prolonged to 31 October 2019. Hopeful progress in the Brexit process happened by a change of the Conservative Party Leader and Prime Minister on 23 July

2019. Teresa May resigned and was succeeded by Boris Johnson, a strong Brexiter. The conflicting state of relations between Conservatives and Labours in the Parliament was going on and the Brexit process was permanently blocked by Labours. The only solution to this problem was a new general Parliamentary election in the UK.

Prime Minister B. Johnson, trying to gain an overall majority in the Parliament to accomplish his main goal of taking the UK out of the EU by the end of January 2020, called for an early general election to take place in December which was eventually passed into law. At first, the new deadline for Brexit was established on the day of 31 January 2020 and consequently the British Parliament announced the general election on 12 December 2019. The election resulted in a Conservatives landslide victory, in their largest majority since 1987.

As we could observe Brexit was a massive, complicated, unprecedented, uncertain and slow politico-legislative process before the last general election. The result of the election revealed the Conservatives strengthening their position on Brexit, with B. Johnson's securing a mandate to ensure the UK's departure from the Union at the end of January 2020.

The legislation passed its final parliamentary stage on 22 January 2020, after more than three years of bitter wrangling over how, when and even if Brexit should take place. The next day on January 23 Queen Elizabeth gave the Brexit bill Royal Assent and so the bill became UK law. Prime Minister Boris Johnson formally signed the EU Withdrawal Agreement on Jan 24 and on the same day the leaders of the European Commission (Ursula von der Leyen) and European Council (Charles Michel) signed this Brexit Agreement in the EU's Europa building. A consent vote in the European Parliament took place on January 29 with a prospect openly expressed by some anti-Brexit MPs that once Britain will return to the Union. The UK was due to leave the EU bloc of states at 24:00 CET on 31 January 2020.

3. Some Aspects of Democracy Deficit Accompanying the Brexit Process

The whole process of Brexit was accompanied by the phenomenon of democratic deficit. Not only was this process accompanied by a democratic deficit, it was also one of the reasons why Brexit actually happened. In this case, we can talk about the democratic deficit in the period before Brexit, respectively before referendum, during campaign and after referendum. The nature of the democratic deficit is determined on the timeline by the individual stages of the leaving process. While in the first stage of the process i.e. in the pre - referendum period, the democratic deficit was captured by the criticism of the British in relation towards the EU (reasons such as sovereignty, bureaucracy, over - regulation, immigrants ...) in the second stage of the process, the democratic deficit was present within the handling of the election campaign. From both sides of course. The last stage captures the reluctant acceptance of the referendum results, as well as attempts for holding a second referendum which undermining the institute of the referendum as a direct form of democracy. When David Cameron became Prime Minister of the United Kingdom in 2010, he probably had no idea that his country's membership in the European Union comes to its end. He also inherited Black Peter in the form of growing Euroscepticism inside the Conservative Party. The conservative European sceptics from times of Margaret Thatcher did not disappear. On the contrary, they have strengthened. To the measurement that their reservations against the European Union could no longer be ignored. Euro-scepticism grew because of the democratic deficit they felt in the form of: loss of sovereignty (manifested by the transfer of competences from the national parliament to the institutions of the European Union) increased regulation and bureaucracy and a quota system to redistribute immigrants from the 2015 immigration crisis, thereby losing control of who can enter the country - this would disrupt the established asylum process. From some

point of view is leaving the European Union only one possibility how to escape European chains, and regain full control and sovereignty over state and UK territory (Palkovská, 2018).

In this climate, David Cameron pledged to hold a United Kingdom European Union membership referendum, on condition that he would win parliamentary elections (2015). Cameron himself was for staying in the Union. Former President of the European Council Donald Tusk commented situation like that David Cameron never believed he would have to hold an EU referendum because he expected to fall short of an overall majority in the 2015 election. In this case, David Cameron bet on (un)certainly. He assumed that he would rule with the Liberal Democrats after the elections and that Democrats will reject the referendum proposal. So, the blame for failing to meet his pre-election promise would fall on the coalition partner, and at the same time he could silence European sceptics among the Conservative Party by the fact that he was about to hold a referendum. However, the Conservative Party won the elections in 2015 and formed a government - without liberal democrats. Cameron had to keep his promise and hold a referendum. To this day many people consider the promise of a Brexit referendum after winning parliamentary elections for a gamble that was not worth it. Ever since the migration crisis, the phenomenon of political correctness has entered the Brexit process. The result of political correctness in this case is the idea that every opponent of admission of immigrants and a redistribution quota policy is a conservative bigot xenophobe. It was even more confusing for British workers when former Labor President Tony Blair stood up against Brexit. However, many workers saw the immigration influx as threatening for their work. At that time, Blair coined the thesis: "Free debate is a part of democracy and people are" free to listen". However, many of Brexit supporters were excluded from the public debate. This kind of political correctness was present throughout whole Brexit campaign.

In addition to political correctness, the campaign was also marked by considerable manipulation from both sides. Brexiters were manipulating the referendum mainly in connection with targeted advertising with the help of the British company Cambridge Analytica, which no longer exists. Despite this, Cambridge Analytica has never received any payment for this action from Leave.EU. On the other hand, in addition to the official Vote Remain campaign, globalists and supporters of a united Europe such as George Soros also fought to remain in the Union. He proudly reported that he had spent £ 400,000 on an anti-Brexit campaign (Elgot, 2018). With this sum, he supported the Best for Britain project, which "educates people to make the right choices". The campaign culminated in a day of referendum on June 23, 2016. It was big blow for European Union. Because it was for first time after deepening integration when member state decides to leave "European house" (Somai, 2018, p. 1308).

Some people began to demand a second referendum after a rigged referendum, so the Supreme Court Judgment in December 2016 stated the following: *"The referendum was not legally binding, merely" advisory, "so it can't be ordered to be re-run by a court - any decision to have a fresh referendum would be made by the government and Parliament would have pass and referendum act."* (BBC editorial, 2018).

However, the second referendum eventually took place "de facto". This happened during the early elections in 2019. Where more support for Boris Johnson meant a more authentic approach to Brexit. It was a kind of "confirming" election to the Brexit referendum. At their end stood the strongest conservative party since Margaret Thatcher's victory in 1987. Despite the fact that George Soros had invested £ 2.7 million in the campaign against Boris Johnson through the Best for Britain project (Hale, 2019).

In conclusion, the democratic deficit in this process was ultimately only the tip of the glacier, the majority of which was submerged under the surface which was formed by the historically

rooted British European scepticism against the idea of a common united Europe since the post-war Europe.

4. The UK's Euro-scepticism – One of the Main Brexit Reasons

Traditional British European scepticism played an important role in the UK's leaving from the EU. According to Greek political scientist Georgios Nastos, the core of this European scepticism is national sovereignty and identity manifested in political rhetoric, the media and public opinion. British European sceptics, especially among the conservative elites, perceive the United Kingdom as a global rather than a European player. In this regard, they consider the current EU, including the vast Brussels bureaucracy, as a major obstacle to the economic and trade sovereignty of the UK. (Nastos, 2016)

Natural British European scepticism from the beginning refused to participate in the United Kingdom in the European Communities (EC), and later in the EU. Another form, so-called. she criticized soft European scepticism and distanced itself significantly from the advancing processes of European integration. The British representatives of soft European scepticism criticized in particular the gradual supranationalization of decision-making processes within the EC / EU and promoted the intergovernmental principle of decision-making. The revision of the EC / EU founding treaties, the growing in the competences of the EU institutions and the disproportionate strengthening of the political and human rights dimension together with political correctness at the expense of common economic and trade policies brought disintegration tendencies culminating of the referendum about its membership. In 23 June 2016, the vast majority of British voters decided to leave the Union. The current US President Donald Trump's policy has publicly supported Britain's efforts to exit the common European market.

The UK's diverging attitude towards post-war European integration was first publicly presented by a speech by former British Prime Minister and leader of the Conservative Opposition Winston Churchill on September 19, 1946 at the University of Zurich. In his speech he suggested building a kind of post-war United States of Europe based on an alliance of sovereign states. He was being inclined to create a common European grouping of states, but he did not count on British participation in a united Europe. Conservative Party policy favoured deepening deeper bilateral relations with the USA. (Hrivik, 2016, p. 28) The Labour Party was taken similar attitude too. It refused to integrate Great Britain into transnational European structures. The gradual weakening of the British colonial empire forced Great Britain to establish greater cooperation with the EC in the 1950s. Unsuccessful negotiations about the Association Agreement was resulted to establishment of the European Free Trade Association (EFTA) in 4 January 1960 by signing the so-called European Free Trade Association calling Stockholm Convention (UK, Denmark, Norway, Austria, Switzerland with Liechtenstein and Portugal). Compared to the Treaties of Rome, it was less comprehensive and mainly less ambitious. Its aim was the gradual convergence of tariffs on most industrial production and sometimes their gradual abolition. EFTA did not emphasize the gradual unification of national economies and had no other open or hidden objectives. Within the Joint Council of Ministers all decisions were taken unanimously. Nevertheless, the UK dominated politically and economically in this economic grouping. The USA perceived competition between the EC and EFTA as a threat to the division of Western Europe. Therefore, the then of the USA top political leaders appealed to the mutual cooperation of both organizations, favouring the European Economic Community. Because that the UK's competitive alternative European integration project EFTA failed, in the 1960s, the United Kingdom began applying for EC accession. (Kovar and Horcicka, 2005a, pp. 60-144)

The independence of most Commonwealth states and the consequent decline in foreign trade with the former British colonies resulted in a reassessment of the UK's foreign policy towards the EC. The UK's intention to integrate into the common European market was particularly welcomed by the USA. After the resignation of French President Charles de Gaulle, the United Kingdom, together with Denmark and Ireland, joined the EC in January 1973. Britain's accession delayed for some time the integration of the political framework into European integration. Its position prevented the Dutch intention of establishing European political cooperation into the EC system. Great Britain guarded the independence of its own international policy. The victory of opposition laborers in February 1974 put de facto into questioning Britain's EC membership. *No Entry on Tory Terms and Keep Britain Out* become the main motto of Labour Anti-European propaganda. Together with the poor economic situation and the traditional resistance of part of the British population to engage politically on the European continent, the future of UK's EC membership was uncertain. Labour Prime Minister Harold Wilson, together with Secretary of State for Foreign Affairs, James Callaghan, has approved the so-called. correction mechanism. Its aim was to reduce British contributions to the EC Common Budget. In the referendum on Britain's remain in the EC on 5 June 1975, the majority of British voters accepted new conditions, with up to 67.2% of eligible voters voting. The result of the popular vote was the victory of Prime Minister Wilson and the British Euro-optimists. (Kovar and Horcicka, 2005b, pp. 33-66)

By ratifying the Maastricht Treaty of 1992 by the British parliament, a group of pro-European and European sceptic politicians was formed within the Conservative Party. European sceptics criticized the growing in transnational elements and refused to create a common currency and a common foreign and security policy. Growing the transnational principle of European integration at that time also led to the constitution of new European sceptic parties in the United Kingdom - UKIP (United Kingdom Independence Party) and BNP (British National Party). Some conservatives also suggested leaving the country from the EU. Together to the hard European scepticism, a new generation of politicians was discovered. They were called soft European sceptics and supported of the UK's membership in EU, but they did not support the adoption of a common European currency.

The United Kingdom Independence Party was founded by Alan Skeda in 1993 on the occasion of a campaign against the ratification of the Maastricht Treaty. It asked for the immediate and complete leaving of the UK from the EU. It criticized the loss of British national sovereignty over the EU institutions or the lack of democracy in the EU because of the non-voting nature of the European Commission or the inability of the European Parliament to represent the interests of citizens of the Member States of the Union. UKIP also strongly opposed the over-regulation of the single European market and the UK's inability to reach independent international trade agreements and migration issues arising from EU membership. The party convinced British society that its suffering could only be greatly alleviated if the country was ruled solely by the British Parliament without outside interference from Brussels. According to G. Nastos, the main factors the decision of most British voters to leave the EU were, above all, the question of the sovereignty and identity of the monarchy. (Nastos, 2018)

5. On Some Potential Brexit's Consequences

To analyse political, economic, social and diplomatic consequences of Brexit, as well as key features and issues of the post-Brexit period within the eleven-month transition period (by 31 December 2020) is difficult because the negotiations on future relations between the UK and EU are still in process.

In general, Brexit is expected to gradual disrupt internal equilibrium of the Union and to decrease its influence and credibility in near future. The EU is losing the world's fifth largest

economy, a nuclear power and a member of the UN Security Council. This underlines certain risks for the EU's external relations, due also to weakening its inner cohesion. On the international scene, the EU will lose its position and significance which can mean some certain economic and political risks. Germany and France together achieve a much stronger position and influence within the Union after the UK's departure and this can lead to greater internal instability.

Another key issue of the Brexit concern refers to relations between Northern Ireland (being outside the EU) and the Republic of Ireland as the EU's Member State. The economies of Northern Ireland and Ireland are completely interconnected, considerable amounts of goods and services are crossing the border every day without any checks. Both sides are determined that the Common Travel Area will remain in place, but that in itself does not resolve the challenge of a hard border re-emerging. Because the UK has announced it leaving the EU's Single Market and Customs Union that immediately turns the internal border on the Irish Isle into an external border for the both mentioned unions with all the potential checks that implies. This is a reason why the Irish Government wants a written guarantee from the UK that Northern Ireland will continue to follow EU rules – so goods can continue to move freely across the border.

The UK henceforth remains economically dependent on the Union, in particular regarding its internal market. In fact, 40% of UK's investments in the world refer to the EU and 50% of the capital inputs on the British region come from the Union, so that represent a certain risk for the UK's economy. Moreover, some industries largely stand on the EU's support, like agriculture. Even if it represents less than 1% of the Britain's economy, 55% of its industry depends on the EU's financial contributions and 72% of the export is destined for the EU.

It seems important to mention also possible depreciation of the British pound, which could affect the UK's economy. According to some European leaders, the UK is depriving itself of the numerous advantages resulting from the European Common Market and can suffer from the reduction of trust of international investors. On the other hand, there are some issues about the potential financial instabilities in the Eurozone and its competitiveness.

A study of the European Parliament "*An Assessment of the Economic Impact of Brexit on the EU27*" shows that the EU is likely to face a hole of 9 billion Euros in its annual budget, being the estimated amount of the UK's net contributions. They also show that the volume of trade in goods and services is quite substantial between the UK and the EU27, with 94 billion Euros of exports from the EU27 to the UK, and 122 billion Euros in the EU27's imports. However, according to the Parliamentary study, it seems that the UK is more dependent on the EU, and even if they agree that Brexit will inflict losses on both sides appearing to be more serious for the UK than for the EU. (Barles, B. et al., 2018)

Within the Brexit process, there occurred some preoccupations referring to European citizens living in the UK (around 3, 4 million) and to British citizens (nearly 1 million) living in the EU. For those who are residents in the UK for at least five years, they apparently will be able to apply for "settled status". Nevertheless, if the UK and EU cannot find a deal within the transition period by the end of 2020, there is an issue that British citizens living in the EU could lose their residency rights and access to full-valued health care. However, British expatriates in the Union's Member States are able, to thanks to the European Economic Area (EEA), to employ right of free movement which means in general that EU Members cannot bar or expel citizens of EEA states. There have also been fears that some EU Member States, angered by Brexit, could try to apply pressure on British expatriates as a demonstration of reprisal. Nevertheless, when Brexit had been initiated, EU nationals living in Britain expressed their will of having rather individual "acquired rights" under the 1969 Vienna Convention,

which means they can stay. The same appeal will be probably applied by UK citizens living in the Union. Finally, EU nationals arriving in the UK after a “cut-off date” of 31 January 2020 will probably no longer have the right to permanent residence in the monarchy.

Moreover, the Brexit event will have other cardinal effects at different levels. It will undoubtedly have an impact on the EU, with some Member States probably tempted to follow Britain. The consequences will be also acute on the UK itself, as well as on Scotland and Northern Ireland themselves which did not sufficiently support voting for Brexit in the last general election performed in December 2019. However, the overall result was in favour of the Brexiters, mainly in England.

All these consequences and other issues, arising from this singular situation, explain why the Brexit problem is so unusual and interesting for investigation. Fuzziness and uncertainty of the transition period are actual attributes of the post-Brexit process, specifying its content, consequences and continuation in future. This can be observed from politico-legislative, judicial, economic and human-right points of view, in the UK with the issue of the manner in which this leaving the EU should be officially recorded. Some issues refer to the future relationship between the UK and EU. This is not negligible especially from an economic point of view. The outcomes of the referendum 2016 and the last general election 2019 are compelling the UK's Government and the EU's institutions to redefine the economic partnership between the both entities. This new partnership seems difficult to be designed and set up.

Within the context of the Brexit process the governing Scottish National Party (SNP) in Scotland announced ambitions to organize a second referendum on Scotland's independence, because it refused to support the UK's withdrawal from the EU declaring an interest of Scotland to become a member of the Union in near future. Why is this referendum on Scotland's independence unlikely? To be held, and to have a legal value, this referendum would have to be authorised by some key UK authorities, mainly by the British Parliament. To some extent, this is the same problem as the case of Catalonia in Spain. Aware of this fact, it will be difficult, probably impossible, for Scotland to carry out another referendum on its independence in the following years. But the SNP would appreciate that Scotland, and therefore the UK, can remain a part of the European Single Market. However, this is not guaranteed at all, and there will not be any real answer before the end of the post-Brexit transition period.

To conclude, it appears today that the issue of Scotland's future will be henceforth a part of the UK's destiny. Scotland will remain a firm part of the UK in the next post-Brexit years. This issue is very sensitive. The UK's Government will now really refuse to deal with the second referendum on Scottish sovereignty as well as with the issue of Northern Ireland (being as complicated as the one of Scotland) because its withdrawal priorities have become key in negotiations with the EU's institutions on some post-Brexit relations, cooperation and many other problems.

Another issue referring to Scotland and Northern Ireland seems also very important as these UK countries voted in the last general parliamentary election by their majority to remain in the EU. But it is curious in a case of Scotland where people voted in the 2014 referendum on Scottish independence to remain in the UK. Therefore, it is impossible to set these results aside. That is the reason why the issue of the future of Scotland has been a persistent question since 23 June 2016. Nevertheless, it is a case which could be solved within future economic relationship between the UK and EU.

Brexit's consequences and prospects are now extremely actual which need special exploration for specifying all possible effects and impacts on the European and British levels, as well as on a national level of other Member States. This can enlighten internal dissensions and various questions referring to the future of the EU and UK, and predestination of very European Integration.

Some other possible Brexit consequences in the Union can be, for example, determined by the following ideas:

- the uncontrolled growing of deficit of democracy in the Union caused mainly by European elites and some interests and egoism of the most influential Member States, mainly France and Germany which have been totally controlling European Integration evolution;
- the persisting of the French form of government in the Union which supports centralized governing of the Union and large-scale EU bureaucracy;
- the strengthening of a supranational character of the EU and a position of Brussels' bureaucracy respected first of all by Germany and France;
- the possible loss of a dominant position of the English – the most communication language in the world – among working languages in the EU (this issue is now submitted by some French politicians);
- and next.

To remove these and other risks and doubts on next EU development, to stop disintegration trends, to reduce Euro-scepticism and to strengthen inner stability and unity, the EU inevitably needs acute, reasonable reforms in the post-Brexit period (Hrivák, 2018).

6. Conclusion

The success of the Brexit referendum in 2016 was an unexpected, abrupt phenomenon, in which most of people in UK society and some certain British regions, overwhelmingly decided to leave the EU. Though no majority of political elites in the UK, EU and also in its Member States wanted Brexit to happen, Brexit has become a hard reality at the end of January 2020. After the initial shock from the result of the referendum, a sense of relief and acceptance of the new reality has now been spreading in the whole UK and Union. Brexit has shown divisions in UK society, regional, divisions by age and level of education. It is primarily a consequence of neo-liberalisation of British society and the rising social inequalities it has caused, of immigration to the UK, and of the convincing arguments and promises made by the Brexit campaigners. According to them, it has brought hopeful and, at the same time, significant effects to the UK's economy, society, progress and position on the international scene. However, according to anti-Brexiters, the UK is waited difficult post-Brexit times, moreover they are saying that it can jeopardize the position of the UK citizens working and living in EU countries, and vice versa; and the long-term effects will be more negative for the UK than for the post-Brexit EU27.

How the post-Brexit period will really evolve in the UK and Union, these are issues for next investigation. They can be judged and evaluated after the 11 months transition period (finishing by the end of December 2020) when strategic negotiations on future mutual relations between the UK and EU have been carried out. Only then, there can be seen the first real key impacts of the Brexit on the UK and EU, and on democracy, Euro-scepticism, cohesion, Euro-bureaucracy and so on.

The article has ambition to contribute to the all-European discussion which will be organized by the European Commission and shall start in May 2020.

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Development of Business Demography in European Union Countries

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Abstract

The aim of this paper is to conduct a basic survey of the business environment in the European Union. With regard to the objective of the work, this initial research will analyze business demography such their total number and the creation of new businesses between 2010 and 2017 within the European Union countries. Data for this research are used from the Eurostat database. As part of further research, studies will be published focusing on identifying key aspects leading to easier business start-ups and identifying factors threatening business start-ups, which are also closely related to the subsequent quality of the business environment. This article should therefore be seen as an initial survey to give a partial picture of the state of the business environment in the European Union countries.

Keywords: *business environment, entrepreneurship, European Union*

JEL Classification: *H00, J00, M00*

1. Introduction

Businesses whose main goal is to make profits are one of the most important economic entities in the economy. Like households, they operate in an environment regulated by the state. Their activity is therefore determined from the very beginning by setting the so-called Business Environment. Entrepreneurship is an essential part of today's society, which is considered an important factor for economic growth, for the competitiveness of economies and for decision-making in public order. Entrance to the business itself is very complicated and is influenced by both internal personality characteristics and external conditions of business. It is the process of creating something new, something worthwhile, for which we devote the time and effort necessary and assume taking financial and other risks, but we also receive some reward in the form of monetary or personal satisfaction. (Hisrich, Peters, Shepherd, 2010; Bygrawe, Hofer, 1991) Creating new businesses, especially in declining regions, is seen as a means to secure - future employment opportunities (Delfmann and Koster, 2016).

Entrepreneurial activity is connected with the establishment of a company and its maintenance. Not only for the development of the region is an important carrier of active business activity. Lukes et al. (2013) state that while new entrepreneurial activity is essential to economic dynamics, already established entrepreneurial activity and individuals who do business longer ensure stability in the private sector. Davidsson et al. (2002) have shown that new firms are growing faster than incumbents, making a significant contribution to job creation and replacing job losses in large firms. Lukes et al. (2013) state that, from an economic policy perspective, it is necessary to know how new entrepreneurial activity in individual countries is developing

and in what areas it is starting to do business. This information can contribute to better targeting an economic policy aimed at promoting entrepreneurship.

The aim of this paper is to conduct a basic survey of the business environment in the European Union. With regard to the objective of the work, an analysis of registered economic entities such as their total number and the creation of new businesses in the years 2010 to 2017 in individual European Union countries will be performed. Based on this analysis, data are provided by Eurostat, which provides statistics at European level, which will allow comparisons between countries and regions. As part of further research, studies will be published to identify key aspects to facilitate business start-ups and identify business start-up factors that are also closely related to the subsequent quality of the business environment. This article should therefore be considered as an initial survey providing a partial picture of the state of the business environment in the European Union.

2. Business Activity and Measurement of Business Activity

Entrepreneurship is one of the important elements for achieving sustainable growth in Europe. It has great potential for job creation and thus a reduction in unemployment in the country.

Every business activity is influenced by many external and internal factors that influence it more or less. External business conditions greatly affect each country's business activity, including its overall economic performance. Lukeš and Stephen (2004) have identified external framework conditions such as level of education, government policy and support programs, capital availability, physical infrastructure, research and development that influence the success of SMEs. As a rule, the conditions vary from one country to another, and this is either an advantage or a disadvantage for entrepreneurs in those countries. (Schwab, 2009)

Business development has major benefits for individual states. In their study, van Stel, Carree and Thurik (2005) point out that new business activities contribute to economic growth. Research has shown that new firms are growing faster than established ones (Davidsson et al., 2002), thus contributing significantly to job creation and often replacing job losses in large firms. They create innovation and technological change (van Praag and Versloot, 2007). They further increase competitive pressure, forcing other companies to innovate constantly, increasing productivity. They counteract monopoly tendencies, provide customers with new products and services and consumer choice, and contribute to price optimization. Business career is the preferred career for a significant part of the population. Reynolds and Curtin (2008) report that nearly half of adults in the US are involved in entrepreneurship throughout their lives. The contribution of entrepreneurship and the creation of new prosperous enterprises is to support the business environment not only of regions but of the whole state (Lukeš, Nový et al., 2005). These authors are followed by a study by Capella and Lenzi (2016), who investigate the relationship between business and regional growth. The authors argue that the relationship between entrepreneurship and growth is mediated by the characteristics of the innovative environment in which new firms operate, which may explain the high volatility of empirical business results and regional or transnational growth existing in the literature.

There is an OECD study in collaboration with Eurostat, which collects business indicators. The Entrepreneurial Indicators Program (EIP) was launched in 2006 and was the first attempt to compile and publish international business data from official government statistical sources. The aim of this effort was to create a list of indicators, standard definitions and concepts that would guarantee the provision of statistics in this area in the long term. Entrepreneurship is defined within this program as a certain phenomenon associated with entrepreneurial activity. In this sense, entrepreneurship is a phenomenon that manifests itself throughout the economy in various forms. The EIP program provides a comprehensive approach to business

measurement, which not only monitors the business phenomenon but also the factors that influence it.

Attempts at empirical measurement of entrepreneurial activity are very scattered and focus (often intentionally) on only one aspect, especially because there are many definitions of business. In addition, some focus on international comparisons, while others focus on comparing sub-national competences. (Parker, 2008)

Measuring entrepreneurial activity across national contexts is a relatively recent and under-represented field of study. Until the end of the 1990s, when the Global Business Consortium launched annual surveys, very little research on comparable business indicators was conducted. Other indexes and databases have been created in the last decade. (Marcotte 2013)

The most important reason for measuring country-level business is that business has never been treated as a country-level phenomenon. By way of example, key works of literature from the National Systems of Innovation hardly ever mention the term 'business'. Similarly accepted theories of economic growth also do not mention the concept of entrepreneurship (Romer, 1986).

Understanding the role of entrepreneurial activity in national and regional economies remains underdeveloped (Gustafsson and Autio, 2011). The authors emphasize the argument that, at country level, entrepreneurship should be treated as a systemic phenomenon similar to the way in which country-level infrastructures, policies and institutions are treated in the literature on 'national innovation systems' when assessing factors, which determine the country's ability to produce and exploit scientific discoveries and technological innovations (Lundvall et al., 2002). However, there is much evidence to suggest that the quality of business is important and should be captured by any attempt to measure national business (Autio, 2011).

3. Quality of the Business Environment at National Level

However, the very concept of the business environment is very broad and can be understood in many ways. For example, the business environment can be defined as a broad set of external influences that affect the growth, performance and competitiveness of business entities (Odehnal and Michálek, 2011). Another definition says that the business environment is a collection of individual factors from the economic, political, legal, technological, social or cultural spheres. These factors have a significant impact on the quality of business environment conditions, in which business entities develop their activities and significantly influence their competitiveness, performance, growth potential and determine the attractiveness of a given country for foreign investors (see eg Kalinská, 2010). Guinn, Kratochvíl and Hashesh (2009), in turn, define the business environment as the sum of the effects on entrepreneurs, businesses and the business itself. Business development as such is thus directly influenced by the quality of the business environment, which consists of a wide range of business conditions in the areas of legislation, institutional infrastructure and the functioning of markets.

According to Hamplová and Kovárník (2016), an overview of the development of newly created business units is a fundamental indicator of the health and level of the business environment on the national economic scale. If the number of entrepreneurial subjects grows every year, according to the authors, it can be assumed that the climate for entrepreneurship is favorable and helps to develop the business sector, employment and economic growth.

Kadeřábková and Šmejkal (2007) dealt with improving the quality of business conditions, which is a necessary systemic condition for decreasing the corruption of the environment and the extent of the gray economy. It also enables more efficient use of available private and public resources, greatly facilitates the development of entrepreneurial and innovative

activities, especially for SMEs, and increases employment. All these areas are supported in the Czech Republic by a number of specific programs with considerable financial resources. However, their effectiveness would undoubtedly be significantly improved primarily by improving the very quality of business conditions.

According to Szerb, Acs and Autio (2014), current approaches to measuring the business environment across countries can generally be categorized into three categories: (i) output indicators, (ii) attitudes, and (iii) frameworks. Different approaches mean different business concepts at national level.

There are many approaches and methods of measuring the business environment and the related measurement of business activity, not only at national level. The challenge of measurement becomes even more complex, especially when discussing business in individual countries (eg Audretsch, 2007; Reynolds et al., 2005). All measurement approaches are mostly based on the evaluation of hard and soft data. Measuring and evaluating the business environment itself is a very demanding process, almost impossible for individuals, and therefore there are various institutions that deal with this topic.

4. Development of the Number of Economic Subjects in the Member States of the European Union

Support for small and medium-sized enterprises is becoming one of the key topics of discussions on the economic development issues of countries, especially at present, when the professional public is interested in the link between the development of small and medium-sized enterprises and the degree of economic development in the country.

As part of this survey, it should be noted, with regard to data acquisition, that not all registered economic operators may actually be in business. For example, there may be extinct companies and individuals who have no revenue or no employees. On the basis of publicly available sources, the numbers of these passive economic entities cannot be ascertained accurately and their numbers are only estimated, but despite this fact it is possible to create some idea of the origin and extinction and the total number of economic entities across the Member States of the European Union.

Entrepreneurs have a significant impact on the overall employment of each country. In 2015, the Czech Republic ranked among the top in the European Union in terms of the number of business entities. The percentage of self-employed people was the fifth highest among the European Union countries. Only Greece, Italy, Romania and Poland recorded a higher share of entrepreneurs.

The first view of the development of the number of economic registered entities is presented in Table 1, which lists the population of active energy in t-number in the years 2010 to 2017 in individual countries of the European Union. Table 1 shows the overall year-on-year increase in economic entities in most EU Member States. In Cyprus, there is a slight year-on-year overall decline in population of active enterprises in t-number. The fluctuating trend also occurs in Denmark, where from a slight increase and decrease subsequently occurs in 2016 and 2017 a significant increase in the population of active enterprises, the same can be found for Malta and Spain. Within the European Union, the most numerous populations of active enterprises in Italy is almost 4.000.000, followed by France, Germany and the United Kingdom, where the population of active enterprises is close to 3.000.000.

Table 1: Population of Active Enterprises in t-number in the EU Countries in 2010-2017

<i>country/time</i>	2010	2011	2012	2013	2014	2015	2016	2017
Austria	426 815	430 296	432 234	431 680	419 779	409 199	412 850	411 441
Belgium	597 850	612 143	620 254	620 192	634 384	642 130	659 387	673 000
Bulgaria	323 872	319 937	323 745	327 503	332 800	339 175	347 962	347 730
Croatia	NA	NA	147 798	145 800	146 766	146 129	147 181	149 118
Cyprus	51 464	51 014	51 127	49 361	49 121	50 569	52 325	NA
Czechia	969 801	989 952	987 609	968 621	1 022 045	1 026 355	1 037 883	1 036 661
Denmark	212 593	218 082	218 078	216 297	217 960	216 458	224 942	230 218
Estonia	70 302	72 178	76 002	79 314	80 473	82 769	85 737	89 729
Finland	286 432	291 080	291 410	290 778	293 638	291 270	289 609	299 476
France	2 947 623	2 977 599	3 039 203	3 181 072	3 414 614	3 492 052	3 558 735	3 750 160
Germany	2 958 720	2 985 718	2 997 832	2 972 456	2 818 836	2 795 899	2 801 030	2 801 787
Greece	NA	NA	NA	NA	NA	777 268	765 974	770 002
Hungary	563 368	557 889	524 749	515 925	522 058	531 121	535 507	555 980
Ireland	195 431	189 055	185 530	NA	238 249	248 843	250 033	271 166
Italy	3 985 434	3 970 747	3 953 714	3 904 219	3 846 659	3 819 956	3 849 594	3 838 814
Latvia	82 650	87 973	93 664	97 023	100 979	110 310	116 393	113 754
Lithuania	120 830	131 986	150 855	158 190	177 752	185 954	197 254	204 555
Luxembourg	27 611	28 516	29 122	30 223	31 246	31 906	32 391	33 594
Malta	33 039	32 824	31 427	30 494	31 841	32 143	36 215	37 853
Netherlands	970 457	1 013 255	1 040 751	1 051 429	1 075 534	1 112 691	1 155 256	1 180 726
Poland	1 957 113	1 983 731	1 989 879	2 015 249	2 025 270	2 059 967	2 015 506	2 083 554
Portugal	875 083	846 013	807 358	791 101	794 398	818 120	843 693	878 213
Romania	450 168	609 827	647 325	689 983	696 142	695 108	717 388	733 781
Slovakia	374 114	421 909	404 369	398 895	438 067	446 471	454 191	481 389
Slovenia	123 467	125 413	128 088	134 601	137 438	141 118	143 451	142 850
Spain	3 102 016	3 056 440	3 012 443	2 951 815	2 943 908	2 970 947	3 026 237	3 034 187
Sweden	667 421	715 879	736 112	719 505	727 258	740 182	758 640	769 912
United Kingdom	2 013 225	2 027 600	2 054 940	2 126 775	2 218 955	2 326 020	2 467 365	2 550 225

Source: Eurostat, Business demography

It is also advisable to know the strengths and weaknesses and their differences between countries in the field of entrepreneurship in starting and maintaining a business. For example, the Czech Republic, in its strengths compared to other countries, has the ability to respond flexibly to change and, thanks to smaller business owners, make quick decisions. As regards the weaknesses of the Czech Republic in comparison with other countries of the European Union, there are limited capital resources, administrative burden (bureaucracy), long legislative processes and higher demands on the qualification of workers. The most common threat of the Czech Republic in the field of establishing and maintaining business is the departure of highly qualified workers abroad, technical and technological lagging and competition of large companies across countries. Further research offers a more detailed focus on the weaknesses and strengths of the business and business environment in European Union countries.

The establishment of new enterprises is one of the main indicators of the dynamics of the business sector. It basically reflects a very important dimension of entrepreneurship in a given country, namely the ability to start a whole new business. The following table 2 shows the births of enterprises in the t-number in the EU countries in 2010-2017. Looking at Table 2, it can be seen that in most countries there is a fluctuating trend, with a decline in the number of new births prevailing. The exception is the period from 2015 to 2016 and 2017, when there is a significant increase in new business in the European Union countries except countries such as Austria, France, Germany, Greece, Italy, Latvia, Slovenia, Spain and Sweden. The deviation can be seen in Malta and the United Kingdom, where in 2016 there is a large increase in new businesses and a year after the decline of up to 2.000 enterprises and in the United Kingdom it is a decrease of over 26.000 new businesses.

Table 2: Births of Enterprises in t-number in the EU Countries in 2010-2017

<i>country/time</i>	2010	2011	2012	2013	2014	2015	2016	2017
Austria	34 198	32 971	32 228	30 525	29 480	28 082	29 744	27 801
Belgium	41 162	43 231	38 575	32 308	39 070	41 102	41 157	42 745
Bulgaria	36 890	35 061	42 136	39 055	39 333	40 358	43 434	41 723
Croatia	NA	NA	12 123	14 775	11 411	12 185	12 856	13 358
Cyprus	2 011	2 307	2 786	3 034	3 375	4 510	5 386	NA
Czechia	110 880	104 479	85 522	77 662	93 360	85 645	90 436	94 755
Denmark	23 266	26 365	23 627	22 222	24 283	23 012	26 183	26 092
Estonia	7 794	8 567	9 249	8 771	8 631	8 512	9 066	10 594
Finland	28 424	28 475	25 949	20 930	22 210	18 811	19 153	28 586
France	376 631	328 117	308 326	302 580	339 075	328 884	346 804	375 966
Germany	258 076	258 661	238 205	219 603	202 984	198 135	188 788	189 464
Greece	NA	NA	NA	NA	NA	39 896	34 527	34 490
Hungary	56 370	55 676	45 151	50 847	52 101	56 799	57 561	71 485
Ireland	11 237	11 847	12 551	NA	16 257	18 100	19 249	22 241
Italy	265 060	264 671	275 427	276 538	274 489	279 132	296 906	276 889
Latvia	13 803	16 880	15 768	14 856	15 194	19 003	18 808	14 102
Lithuania	25 463	31 299	37 539	36 468	43 543	34 490	37 132	40 336
Luxembourg	2 629	2 767	2 771	2 955	3 134	2 989	2 891	3 103
Malta	2 299	1 143	1 947	1 890	3 599	2 730	5 925	3 873
Netherlands	101 002	113 226	106 868	105 904	108 786	107 946	111 159	111 683
Poland	270 271	247 161	229 174	250 051	253 061	249 815	248 389	253 493
Portugal	103 859	106 318	100 727	114 862	117 201	130 156	131 651	138 318
Romania	39 211	79 284	79 362	109 820	70 912	79 496	74 387	80 251
Slovakia	49 354	60 703	42 793	39 676	86 672	53 899	49 776	65 814
Slovenia	12 757	12 746	12 920	17 831	15 158	15 154	14 884	14 813
Spain	242 228	243 800	247 690	247 464	287 611	274 172	301 042	275 654
Sweden	50 214	58 653	50 360	50 806	52 606	53 185	53 005	50 853
United Kingdom	210 950	234 495	242 400	311 845	316 540	343 550	371 370	345 445

Source: Eurostat, Business demography

4. Conclusion

With regard to the time development of the population of active enterprises in t-number between 2010 and 2017 in the countries of the European Union, it can be seen that in individual countries there is a long-term total year-on-year growth of economic subjects. A fluctuating trend occurs in Denmark, where a slight increase and decrease in 2016 and 2017, followed by a significant increase in the population of active enterprises, the same can be found for Malta and Spain. In Italy, France, Germany and the United Kingdom, we find the largest population of active enterprises.

In most countries, there is a fluctuating trend, with a fall in the number of new born enterprises. The exception is the period from 2015 to 2016 and 2017, when there is a significant increase in newly created companies in the European Union countries. In Austria, France, Germany, Greece, Italy, Latvia, Slovenia, Spain and Sweden it is a slight increase in births of enterprises in t-number. Malta and the United Kingdom are also the exception, with a large increase in new businesses in 2016 in Malta, with a year-on-year decline of more than 2.000 businesses and a decrease of over 26.000 new businesses within the United Kingdom.

This article was created as an initial survey of the business environment with regard to the level of total economic entities across the European Union countries and the number of their new born enterprises in t-number. Based on the obtained information, it is possible to carry out their subsequent application in identifying the business environment, the level of bankruptcies of economic entities in EU countries and other research focused on this issue.

As already mentioned, this is an initial survey providing a partial picture of the state of the business environment in the European Union. Further research will focus on the quality of the

business environment in individual EU countries and its impact on countries' economic performance. Based on addressing the business environment and its impact on economic performance and competitiveness, the foundations for further concretisation of the established context at the lowest, communal level will be created. The benchmarking method identifies determinants of successful development of the business environment, which could also be transferred to the Czech economy at several levels.

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The Long-Run Impact of Minimum Wages on Total Factor Productivity in the European Union

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Abstract

Nowadays, the question of “fair minimum wages” is highly discussed among the EU and national authorities. Within the framework of The European Pillar of Social Rights, the EC have already launched consultations to strengthen existing minimum wage systems in the member states. But how does the minimum wage effect the long-term economic performance in the members states? The aim of the paper is to determine the long-run impact of national statutory minimum wages on total factor productivity in the European Union. The empirical analysis is conducted on unbalanced panel data set including observations for 23 cross-sections (member states with statutory minimum wages) over the period of 1995-2017, by means of panel cointegrating regression (FMOLS estimation method). In line with endogenous growth theories, variables for human capital and R&D, as key determinants of productivity, are included in the regression. The result supported the long-run relations between total factor productivity and minimum wages and suggested a statistically significant negative impact.

Keywords: *endogenous growth theories, panel cointegrating regression, statutory minimum wages, the European Union, total factor productivity*

JEL Classification: C23, E24, E61, J08, O43

1. Introduction

Recently, the question of “fair minimum wages” is highly discussed among the EU and national authorities. In general, wages present one of the 20 policy domains of the European Pillar of Social Rights where is stated that “adequate minimum wages shall be ensured, in a way that provide for the satisfaction of the needs of the worker and his / her family in the light of national economic and social conditions, whilst safeguarding access to employment and incentives to seek work.” (EC, 2020). The topic to fully implement the European Pillar of Social Rights and reform existing minimum wage systems have been highlighted by Ursula van der Leyen in her Political Guidelines for the next European Commission 2019-2024 (von der Leyen, 2019) and adopted as one of current 6 Commission priorities. The European Commission have already launched consultations with Social Partners to strengthen existing minimum wage systems in the member states.

In the European Union, current minimum wage policies differ widely among the member states as there is no harmonized minimum wage policy. Even an issue of harmonized approach to minimum wage floors has been discussed for several years at both political and academic level, clear consensus has not been still reached. Many leading policy makers, scholars and part of trade union movements advocate the idea of harmonized minimum wage for all workers in the

EU. But there is also a strong resistance from those advocating national autonomy and recent status quo (institutional diversity among the EU Member States).

However, any policy action requires a previous assessment of its effects on macroeconomic aggregates. In the case of minimum wages, the theory and empirics give only ambiguous answer on the role of minimum wage in determining employment and even more contradictory answer for other indicators. It implies a necessity of further empirical analysis. In this paper, we focus on the impact of minimum wage on total factor productivity which is considered as driving force of long-term growth and national competitiveness. To be more precise, the aim of this paper is to determine the long-run impact of national statutory minimum wages on total factor productivity in the European Union. The theoretical background for the empirical analysis is represented by endogenous growth theories that emphasize the role of research and development, human capital and structural parameters (including institutions) in determining total factor productivity. Furthermore, we assume an existence of long-run relationship between productivity and regressors leading to the application of cointegration regression.

The paper is organized as follows. After a brief introduction to the topic, the research goal is highlighted. The main theoretical channels between minimum wage and total factor productivity, and current minimum wage systems in the member states are presented in the first subsection of section 2. The second subsection is devoted to model specification and methodological issues. The third section presents the empirical findings and short discussion on the relevancy of our findings. The last section summarizes the main findings and conclusions.

2. Problem Formulation and Methodology

In this section we present a theoretical background and list an overview of recent empirical studies related to the research question. The current minimum wage system in the EU is briefly described. In the second subsection, we specify an empirical model, estimation methods and present a dataset applied for empirical analysis.

2.1. Theoretical Background and Empirical Evidence

The minimum wage represents a labour market institution that sets the lowest limit for wages of paid employees (Boeri and Van Ours, 2008). The introduction of legally binding minimum wage floors is, as in the case of other labour market institutions, promoted by existence of market failures and its potential to increase the efficiency of labour markets. It improves a situation of low-paid workers leading to higher income equality in the society. Furthermore, a moderate rate of statutory MW would decrease inequity and establish balance between the bargaining position of employers and workers (European Commission, 2017).

2.1.1. Minimum Wages and Productivity – Theory and Empirics

Numerous theoretical and empirical works deal with a question about the impact of minimum wage on labour market outcomes and main macroeconomic aggregates. However, the conclusions are ambiguous. As Boeri and Van Ours (2008) pointed out, the theory provides clear conclusions only in the case of its employment effects in competitive labour markets. In the case of labour markets with distortions, the predictions are more complicated. Regarding the impact of minimum wage on productivity, the findings are even more contradictory.

Minimum wage, as a wage-setting institution, may create barriers for potential high-growth firms (mainly small firms which cannot bear high costs at the beginning of their life cycle) in

regulated labour markets, having in turn negative impact on productivity. It can be theoretically explained by two mechanisms. First, if wages are artificially set it will be more problematic for high-productivity firms to attract skilled employees by wage incentives (Henrekson, 2020). Second, a system which establishes wages centrally based on general characteristics, without considering the intra-firm differences in productivity, has negative impact on the cooperation between actors inside the firms and thereby impedes their future growth (Henrekson and Johansson, 2009). On the contrary, minimum wage may theoretically involve more skilled labour into the production process increasing the level of aggregate skills and, in turn, the level of average productivity (Neumark and Wascher, 2007; Aaronson and French, 2007). Beside this substitution, an incentive to invest more in human capital of low skilled workers with aim to avoid unemployment can be induced, too (Agell and Lommerud, 1997).

Regarding current empirical studies, Bassanini and Venn (2007) found out a positive effect of minimum wage on long-run labour productivity and TFP. In their cross-country study for 18 OECD countries from 1979 to 2003. It is explained by the substitution of less skilled workers for more skilled ones and by productivity enhancing adjustments of employers (investments in training and new technologies) as response to increasing cost on labour force. However, a generous UB system could reduce this positive effect of MW by reducing the opportunity cost of remaining unemployed. Alternatively, an increase of MW may lead to more efficient reallocation of sources (from small, less productive enterprises to larger, more productive ones) and productivity gains (Alatas and Cameron, 2003; Del Carpio et al., 2015).

2.1.2. Stylized Facts about Statutory Minimum Wages in the EU

In the European Union, national minimum wage systems are really heterogeneous. In 2020, national statutory minimum wage was applied in 22 EU member states – Belgium, Bulgaria, Croatia, Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and United Kingdom. In Cyprus, minimum wage was set only for specific occupations. The rest of EU Member States have no national statutory minimum wage and applied non-statutory minimum wage floors established in sectoral collective agreements. However, differences regarding the levels of wage floors and the institutional characteristics (wage setting mechanism, existence of specific rates for different working groups, coverage, etc.) exist even in countries with statutory minima.

Table 1 summarizes information on statutory minimum wage systems in the EU member states, including year of first introduction, rate and nominal minimum wage levels in 2020. Most of the listed countries have established national minimum wage floors at first time in the second half of the 20th century, with exceptions of Ireland, Croatia and Germany. In almost all countries, legal minima are set on monthly rate. Only Germany, Ireland, The United Kingdom and Malta apply monthly and weekly rates. Nominal minimum wages for 2020 refer to national statutory minimum wages converted to monthly payments in euro. In the case of Greece, Portugal and Spain, 14 annual wage payments were converted to 12 ones. As it is visible from presented data, differences among monthly wage floors are enormous. While only 312 EUR is guaranteed as minimum wage in Bulgaria, minimum wage-earning employees get 2142 EUR in the Netherlands. Except Slovenia, all the countries are far beyond or over the average of statutory minimum wages in the European union (975 EUR in 2020). Regarding year-on-year changes in minima, the most considerable increase was detected in Bulgaria with almost 20%. Moreover, five countries (the Czech Republic, Greece, Poland, Slovakia and the United Kingdom) realized an increase in minimum wage higher than 10% in 2020 compared to 2019.

The differences in nominal values are partially induced by disparities in productivity and prices across the countries. Looking at the ratios of minimum to mean wages, the variation is smaller than in the case of absolute measures. In 2018, statutory minimum wage in Greece was the furthest from the centre of wage distribution (i.e. the lowest ratio). On the contrary, minimum wage represented the half of mean wage in France and Slovenia was very close, too.

Table 1: Statutory Minimum Wage Systems in the EU Member States

	First Introduction	Rate	Minimum wage in 2020		MW to mean wage in 2018
			Adjusted monthly level [EUR]	Year-on-year change [%]	
Belgium	1975	monthly	1 594	0.00	0.39
Bulgaria	1966	monthly	312	19.54	0.45
Croatia	2008	monthly	546	7.91	0.44
Czech Republic	1991	monthly	575	10.79	0.36
Estonia	1991	monthly	584	8.15	0.37
France	1970	monthly	1 539	1.18	0.50
Germany	2015	hourly	1 584	1.73	0.40
Greece	1991	monthly	758	10.82	0.32
Hungary	1991	monthly	487	4.96	0.40
Ireland	2000	hourly	1 707	3.08	0.40
Latvia	1991	monthly	430	0.00	0.40
Lithuania	1990	monthly	607	9.37	0.41
Luxembourg	1973	monthly	2 142	2.49	0.44
Malta	1974	weekly	777	1.97	0.43
Netherlands	1969	monthly	1 654	2.35	0.39
Poland	1970	monthly	611	16.83	0.43
Portugal	1974	monthly	741	5.86	0.44
Romania	1949	monthly	466	4.48	0.43
Slovakia	1991	monthly	580	11.54	0.39
Slovenia	1995	monthly	941	6.09	0.48
Spain	1963	monthly	1 050	0.00	0.35
United Kingdom	1999	hourly	1 760	10.21	0.45

Source: Own construction based on data from OECD.Stat, Eurostat, Eurofound and WSI Minimum Wage Database (version: January 2018).

Note: Adjusted MW refers to monthly statutory minimum wages converted to 12 monthly payments in euro.

The presented data don't contain information about Cyprus that represents a specific case of statutory minimum wage systems. The government may fix minimum wage floors for occupations in which wages are unreasonably low. The Minimum Wage Order of 2012 (MLWSI, 2012) applies minimum wages for the following occupations: shop assistants, clerks, child and personal care workers. The monthly rate upon recruitment is 870 EUR and the monthly wage for workers, who have completed a six-month period of employment at the same employer, is higher by 54 EUR per month.

2.2. Model and Data

In order to estimate long-run impact of statutory minimum wages on total factor productivity in the EU, a panel cointegration regression is applied. The analysis is based on endogenous growth theories and assumption of long-run relationship among the variables.

2.2.1. Model Specification

To specify the baseline model, we start with a standard Cobb-Douglas production function with two inputs and parameter representing the state of technology. Assuming Hick-neutral technological change, the production function takes the following form:

$$Y_{it} = TFP_{it} L_{it}^{\alpha} K_{it}^{\beta} \quad (1)$$

where Y stands for total output, TFP is total factor productivity, L is labor input (number of hours worked), K is capital input (capital stock), α_t, β_t represents the shares of labor and capital incomes in the total income (labor and capital compensation) and i, t are indexes for units and time.

Total factor productivity is defined as the Solow residual (Solow, 1957)

$$TFP_{it} = Y_{it} / L_{it}^{\alpha} K_{it}^{\beta} \quad (2)$$

i.e. that part of total output which rest after accounting of labour and capital input. (assumption of constant returns to labour and capital inputs). Based on the theoretical assumptions of endogenous growth theories, TFP is endogenously determined and can be explained by knowledge, embodied in human capital and research and development, and other factors including institutions (i.e. Aghion and Howitt, 2009). Then, TFP can be expressed as:

$$TFP_{it} = A_{it} RD_{it}^{\gamma} HC_{it}^{\delta} I_{it}^{\theta} \quad (3)$$

where RD is stock of research and development, HC is stock of human capital, I represents institutional variables and A stands for other unmeasurable determinants. We assume that the unmeasurable part of total factor productivity is driven by country-specific effects in exponential form. As we are interested in the effect of specific labour market institution, the institutional variable I is replaced by the minimum wage MW .

By log-linearization, we get the following econometric equation on which the empirical analysis of long-term relations will be based:

$$tfp_{it} = \vartheta_i + rd_{it}^{\gamma} + hc_{it}^{\delta} + mw_{it}^{\theta} + \mu_{it} \quad (4)$$

where lowercase letters denote natural logarithm of corresponding variables, ϑ_i stands for country specific effects and μ_{it} is an iid error term.

2.2.2. Estimation Methods and Data

To estimate the baseline equation (4), we apply a panel cointegration regression. It requires nonstationary time series and existence of their integrated linear combination. Note that a linear combination of two or more $I(1)$ series may be stationary and in that case we talk about cointegrated series. The linear combination defines a cointegrating equation and coefficients characterize the long-run relationship between the variables (Engle and Granger, 1987).

Therefore, at first panel unit root tests are provided for all variables. We perform 4 panel unit root tests to increase the reliability of the results, namely: Levin, Lin and Chu; Im, Pesaran and Shin; Fisher-type tests ADF and PP.

After verification of nonstationary requirement, two type of panel cointegration tests are performed: Pedroni (Engle Granger based) and Kao (Engle Granger based) cointegration tests.

In the case of cointegrated series, ordinary least squares estimation lead to consistent estimation with faster converging than is standard (Hamilton, 1994). However, the OLS estimates have an asymptotic distribution that is generally non-Gaussian and exhibit asymptotic bias and asymmetry leading to invalid conventional testing methods. Therefore, we apply fully modified ordinary least squares estimator (FMOLS) that overcome these shortcomings. Finally, we provide residual diagnostics to test the presence of unit roots in residuals (correlogram and unit root test). It is well-known that if the variables are cointegrated then the residuals should be $I(0)$.

The empirical analysis is conducted on unbalanced panel dataset that includes observations on 23 member states of the EU from 1995 to 2017. The period of analysis is determined by data availability and by economic circumstances in previous years. The early 1990s were marked by post-transitory shocks in certain countries leading to substantial deviations from equilibrium conditions. The number of cross-sections refer to the number of member states with statutory minimum wages. In total, the dataset includes 3 explanatory variables, namely research and development stock (RD), human capital stock (HC) and statutory minimum wages (MW), and total factor productivity index (TFP) as dependent variable.

Total factor productivity is calculated in accordance with equation (2). Labour input L is measured by total hours worked based on data from Total Economy Database. Capital stock K is calculated by Perpetual inventory method (PIM) according the following expression:

$$K_t = I_t + (1 - \delta) K_{t-1} \quad (5)$$

where I_t denotes nominal investment in time t and δ is an average geometric rate of depreciation rates from Feenstra et al. (2015). Data on gross fixed capital formations are from Eurostat. The initial capital stock is calculated based on la Fuente and Doménech (2006):

$$K_0 = I_0 / (g_I + \delta) \quad (6)$$

where I_0 is investment in initial year and g_I is an average growth rate of investment. The rate of labour income α in total income is derived as a ratio of compensation of employees plus mixed income to total income (data from Eurostat). As the rate of income and the rate of capital give together one, capital compensation β is calculated as 1 minus labour compensation α .

Research and development stock (RD) is calculated analogously to capital stock (5) in TFP calculation. Data on nominal R&D expenditures are obtained from Eurostat. Human capital stock (HC) is proxied by average year of schooling and an assumed rate of return to education (human capital index from Pen World Table 9.0). Data in nominal minimum wages were obtained from Eurostat, WSI Minimum Wage Database and MLWSI, Republic of Cyprus.

3. Empirical Results

The empirical results of panel cointegration regression based on equation (4) are reported in Table 2. We repeated the regression three times: 1) for all member states with statutory MW (*Full sample*), 2) for states with statutory MW and membership before 2004 (*Old member states*), 3) for states with statutory MW and membership since 2004 (*New member states*). In all cases, the results strongly indicate an existence of long-run relationship between the variables. The statistics of Pedroni cointegration tests are reported in Table 2. In majority of cases the null of no cointegration was rejected at conventional significance level. The weakest indication for cointegration relation was obtained in the case of second regression (the null

hypothesis was significantly rejected in 3 out of 7 cases). Therefore, we repeated the test via Kao cointegration test, and the result confirmed the previous findings (the null hypothesis was rejected at $\alpha=0.05$).

Regarding the reported results, all the estimated coefficients are statistically significant. The estimates for research and development stock and human capital stock (both with positive signs) approved their productivity enhancing effect in long run suggested by theory. These findings are robust to sample changes as statistically positive impact was estimated also for the sample of old and new member states. Considering the size effects, the stock of human capital had bigger impact on total factor productivity than the R&D stock through all samples.

Table 2: Results of Panel Cointegration Regressions and Cointegration Tests

Dependent variable: ln_TFP			
	Full sample	Old member states	New member states
ln_RD	0.264*** (4.341)	0.828*** (7.280)	0.160*** (3.446)
ln_HC	2.456*** (4.408)	2.590*** (4.298)	3.296*** (6.550)
ln_MW	-0.098* (-1.839)	-1.022*** (-6.003)	-0.085** (-2.062)
Observations	444	203	260
Cross-sections	22	10	13
Periods included	22	22	22
Adjusted R²	0.86	0.90	0.81
Pedroni (Engle Granger based) cointegration tests			
Panel v-Statistic	1.381*	-0.996	1.766**
Panel rho-Statistic	-0.563	0.924	-0.680
Panel PP-Statistic	-3.806***	-1.231	-2.953***
Panel ADF-Statistic	-4.511***	-3.801***	-3.233***
Group rho-Statistic	1.849	1.839	1.053
Group PP-Statistic	-6.971***	-2.073**	-7.071***
Group ADF-Statistic	-5.662***	-3.475***	-4.690***

Source: Own estimation via EViews 10.

Note: ***, **, * denotes parameters significant at 1%, 5% and 10%. t-Statistics in brackets. Cointegration regression estimated via FMOLS, with deterministic constant and allowing for heterogenous variances (sandwich method). Observation for 2016 were dropped out from all regression and Germany was dropped out from first two regressions and corresponding tests.

On the contrary, the long-run effect of minimum wage was estimated as negative and statistically significant. According to our estimations, a 1% increase in statutory minimum wage would decrease total factor productivity by 0.098% when all member states with statutory MW are considered. The size effect is more than ten times higher in the sample of old member states. For the sample of new member states, the negative effect is slightly lower with a decrease in total factor productivity by 0.085%. This enormous difference in the long-run impact of MW among the subsamples can be partially explained by substantial differences in nominal wages. The old member states have in average higher minimum wages than the new member states (also after accounting for differences in purchasing power). Therefore, even a small increase in MW would lead to higher negative impact on TFP in those member states.

4. Conclusion

Recently, the question of “fair minimum wages” is highly discussed among the EU and national authorities. The topic even belongs to current priorities of the European Commission. Theoretically, minimum wage as a legally binding lowest wage floor, may improve a situation of low-paid workers leading to higher income equality and establish a balance between the bargaining position of employers and workers. However, theoretical views and empirical evidences of its impact on leading macroeconomic aggregates are ambiguous.

The aim of this paper was to determine the long-run impact of national statutory minimum wages on total factor productivity in the European Union. Total factor productivity is generally considered as leading determinant of long-run economic performance and national competitiveness. Therefore, an analysis of productivity effects of statutory minimum wages would enrich the current state of knowledge and serve as basis for adequate policy recommendations.

In the European Union, current minimum wage policies differ widely among the member states as there is no harmonized minimum wage policy. The institutional diversity is reflected in both levels of minima and institutional characteristics. Nowadays, 22 member states plus Cyprus (a specific case) apply national statutory minimum wages and the rest of members establish sectoral minimum wage floors by collective agreements. In 2020, the average minimum wage across the European union is 975 EUR. Except Slovenia, all the countries are far beyond or over this minimum. In average, old member states are higher minimum wages than new ones.

Our empirical results for member states of the EU with statutory minimum wages approved the theoretical expectations of the importance of knowledge and institutional variables in determining productivity. The assumptions of long-term cointegration relationship was approved, too. However, the regression estimates indicated opposing effect of the determinants. While stocks of research and development and human capital was estimated as having productivity enhancing effect, the coefficient of minimum wage indicated significantly negative impact on total factor productivity. It is in line with our previous findings about a negative impact of minimum wages on TFP growth (Čekmeová, 2016). Moreover, we found out that the negative effect of minimum wage varies across the subsamples. The highest size effect was estimated in the sample of old member states. We suppose that it is caused by relatively high minimum wage floors in these countries relative to new ones.

Based on these results, we can conclude that measures to improve the level of R&D and human capital stock are inevitable for long run total factor productivity. At the same time, policy actions that increase statutory minimum wage floors impede the level of productivity. Therefore, attempts to ensure fair minimum wages must be realized with cautious and with regard to the productivity impeding effect of minimum wage. Especially in countries where current levels of MW are already relatively high.

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The European Union Economic Relations with Developing Regions, the Case of Latin America and the Caribbean

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Abstract

The European Union represents a unique regional integration with significant position in the world economy distinctive to interdependence and thus, it cannot be isolated from the rest of the world. The external relations of the EU with developing regions are important not only for the Union (energy security, political stability, etc.) but also for developing countries in order to expand commercial ties, receive development assistance, facilitate investment and remittance inflows and thus to stimulate their economic growth. The European Union as the largest development assistance provider and one of the largest economies in the world plays crucial role in advancement of North-South economic relations. The aim of this paper is to analyse bi-regional economic relations between the European Union and Latin America and the Caribbean and to identify the current state and future potential of them. In conclusion, we discuss the importance of the EU-Latin America and the Caribbean economic relations and trade policy of the EU towards LAC region, in light of current deepening of relations.

Keywords: *development assistance, EU, Latin America and Caribbean, relations, trade*

JEL Classification: *F13, F35, O24, O54*

1. Introduction

The European Union (the EU) as a global economic actor maintains external relations with third countries for several reasons. On the one hand, it develops foreign relations with (potential) candidate countries and with countries in its neighbourhood in order to ensure security, political and economic stability. On the other hand, the EU expands foreign relations with global economic and political powers. The EU also develops bilateral, multilateral or inter-regional relations with countries belonging to the regions of Global South such as Latin America and the Caribbean, Africa, the Middle East and Asia. The European Union's external relations are influenced by many factors – history, culture, geography, energy security, stability, national interest and many others. The external relations of the EU are mostly carried out by foreign and security policy, commercial policy and by development assistance. Due to the specificity and intergovernmental approach to the Common Foreign and Security Policy of the EU, we will deal with the EU's economic relations with third countries.

The aim of this paper is to analyse the European Union's external relations with Latin America and the Caribbean (LAC countries) as one of the world's developing regions. In the second part of this paper, we identify the most important milestones in the development of current EU-Latin America and the Caribbean relations (EU-LAC relations). In the third part, we analyse bilateral, multiparty and interregional trade relations between the European Union and

Latin American countries or regional groupings. We put emphasis on the inter-regionalism as one of the most important foreign trade policy tools in the EU external relations. Moreover, we focus on the EU-Mercosur Association Agreement and its trade pillar with the aim to prove a trend of deepening bi-regional relations of the EU as well as to highlight present obstacles of trade liberalization. In conclusion, we sum up the crucial findings of our analysis.

2. Development of the EU Relations with Latin American Region

Geographic position, rising economic and political power of the United States by the early 19th century had become a portent of the US dominance in the Western Hemisphere. Subsequently, the US ambition for regional hegemony was declared by the Monroe Doctrine in 1823 with initial aim to eliminate European influence in the Americas. On the other hand, the European involvement in LAC region through investments and trade had played an important role in development of several region's economies during the implementation of export-led growth strategy in these countries from the mid-1800s until the Great Depression. The Prebisch-Singer thesis claimed that the terms of trade of primary commodity exporters (later known as countries at the periphery of capitalism) are worsening due to faster decline in prices of raw materials than decline in prices of manufactured products (Mallorquin, 2017). Thereafter, most of Latin American economies started to implement state-led import substitution industrialization model (ISI model) of economic growth, based on protectionist measures that resulted in limitation of region's international trade. In the 1980s, many of Latin American countries suffered from serious debt crises that led to the decline of applying ISI model. New economic development model based on neoliberal orthodox policies and trade liberalization, later known as Washington Consensus started to be implemented along Latin America. Thus, the trade liberalization could be extended beyond Latin American and Caribbean region.

The EU-Latin America and the Caribbean relations are based on historical, colonial, cultural, political as well as economic ties. In general, majority of Latin American countries originated from former Spanish and Portuguese colonies. Subsequently, in a period after the establishment of independent states in LAC region, Spain and Portugal had started to develop political and economic relations with LAC countries that are based on historical, cultural, social and linguistic interconnections. Ibero-American Summit, organized at the highest political level can serve as an example of maintaining political dialogue between Spanish- and Portuguese-speaking countries, on both continents. In 1986, Spain and Portugal joined the European Community and thus, they have become the most important actors in relations between the EU and LAC region as well as in designing the European policy towards Latin America (Ministry of Foreign Affairs, 2020). As an evidence, the EU-LAC relations have represented one of the top priorities during four Spanish presidencies of the Council of the EU.

The European Union applies dual approach to the external relations with third countries (Bocianová, 2015). On the one hand, there is a normative approach characterized by the dissemination of the EU values abroad, such as democracy, human rights, freedom, equality and rule of law. The European Community (later the European Union) countries have supported democratization process in political volatile and unstable LAC region that was characterised by the alternation of civil and military governments – military juntas, during the 20th century. As an example, the European Communities were involved in peace process of political settlement in Central America during the 1980s or later in Colombia, in the 1990s. Nowadays, the European Union supports democratization process, reinstatement the rule of law and respect for human rights in Venezuela through peaceful negotiations and new transparent presidential elections. Sanctions against Venezuela have become the EU's foreign policy tool for reaching stability in the country. The EU has also imposed sanctions against

persons and entities in Nicaragua, in 2019, due to human rights violations, undermining democracy and persecution of democratic opposition (European Council, 2019).

On the other hand, there is realistic approach in which the EU follows its own economic and security interests in third countries. In terms of LAC region, the EU's security interests, do not play such an important role as in the countries belonging to the European Neighbourhood Policy. After the analysis of the EU imports from Latin America and the Caribbean, we can see that foodstuffs, agricultural commodities and live animals dominate on commodity structure of imports from the region (Eurostat, 2020). Thus, the food security exceeds the energy security in terms of EU imports from LAC region. The economic dimension of the EU's foreign relations with LAC countries has come to the foreground since the 1990s, while the EU-LAC relations had been more politically and ideologically motivated with the aim to spread the European values until the end of the 1980s (Cameron, 2012). The respect for democratic principles constitutes precondition for developing external relations between the EU and third parties. Thus, the democratic consolidation in Latin America since the 1980s and later in the 1990s brought about the opportunities for developing political and economic relations between many Latin American states and the EU.

The European Union and Latin American and Caribbean interactions are realized at regional, sub-regional and bilateral levels. The strategic partnership between the EU and LAC countries was officially established in 1999 at the first bi-regional Summit held in Rio de Janeiro (Brazil). Since then, bi-regional Summits have been held approximately each two years. In 2006, the Euro-Latin American Parliamentary Assembly – EuroLat was established as a parliamentary dimension of the EU-LAC inter-regional strategic partnership. After the creation of Community of Latin American and Caribbean States (CELAC) in 2011 that groups 33 sovereign countries, the EU-LAC Summits were replaced by EU-CELAC Summits. In theory, trans-regionalism (where states act as individuals) was replaced by interregional approach to external relations between the EU and Latin American and Caribbean states (Hänggi, 2000). The EU-CELAC Summits bring together 61 representatives of states and the highest EU officials. Region-to-region cooperation framework is complemented by bilateral relations as well as by the EU's relations with sub-regional groupings, such as Mercosur, Pacific Alliance or Union of South American Nations.

3. The EU-Latin America and the Caribbean Commercial Ties

The European Union is considered as one of the most outward-oriented economies in the world. The EU has an exclusive competence in the common commercial policy. Economic relations between the EU and third countries in context of trade liberalization can be carried out on bilateral, multilateral or interregional (bi-regional) basis. Since the 2000s, the European Union has started to promote bi-regional external relations with LAC region. The inter-regionalization can be characterized as a process in which one regional integration grouping enters into organized relations (other regional groupings, trade blocs etc.) rather than into relations with individual countries (Gubová, 2014). In other words, inter-regionalism represents the institutionalization of relations among world regions and it can be considered as a manifestation of globalization processes. Thus, inter-regionalism has become important foreign policy tool in the EU external relations. The most likely explanation of the EU inter-regional approach to LAC region is that individual Latin American and the Caribbean economies do not belong to the group of largest world's economies (apart from Brazil) as well as to the group of the most important EU trading partners.

We can classify three main types of trade agreements concluded by the European Union and region's economies. Firstly, there are two bilateral agreements – EU-Mexico Global

Agreement (in force since 2000, renegotiated in 2018) and EU-Chile Association Agreement (trade pillar in force since 2003, now in process of modernization). Secondly, the EU concluded one multiparty Trade Agreement with Colombia and Peru (2013) that was joined by Ecuador in 2016. Ultimately, there are two interregional trade agreements in force – CARIFORUM-EU Economic Partnership Agreement (EPA) since 2008, and EU-Central America Association Agreement (since 2014). Bi-regional EU-Mercosur Association Agreement is under negotiation, while the trade pillar of this comprehensive agreement was politically agreed in 2019 (OAS, 2020). In addition to that, the EU had concluded bilateral agreements with Mercosur founding members. The European Union's agreements concluded with Latin American countries usually consist of three main pillars such as political dialogue, trade and cooperation. These three pillars should serve to put the European Consensus on Development including Sustainable Development Goals into practice and thus to move towards more equitable globalization (Arena et al., 2019). Some of the agreements such as those with CARIFORUM or with Peru, Colombia and Ecuador are asymmetric as regards temporarily benefits to the contracting parties.

On the other side, there do not exist any preferential trade agreement between the European Union and Bolivarian Republic of Venezuela. Furthermore, the EU-Venezuela economic relations suffer from the economic and political crisis in the country. The EU signed Political Dialogue and Cooperation Agreement (PDCA) with Cuba in 2016 that entered into provisional application one year later. The EU-Cuba PDCA focuses on political dialogue, democratic principles, development and cooperation with the aim to strengthen bilateral ties and create deeper trade agreement in the future. The PDCA includes commitment to WTO principles and trade facilitation in accordance with WTO agreements. There is a group of states that benefit from the non-reciprocal unilateral preferential access to the EU markets under the Generalised Scheme of Preferences (GSP). The GSP+ grants full removal on import tariffs on around 66% of the EU's tariff lines for low or lower middle-income countries that ratify 27 international conventions (European Commission, 2020). The only current beneficiary of GSP+ from the LAC region is Bolivia. In 2019, Paraguay was removed from the GSP+ because of its classification as an upper-middle income country by the World Bank. Moreover, the beneficiary of GSP cannot benefit from other preferential access to the EU markets. Another preferential trade scheme is Everything But Arms (EBA) that grants fully free access to the EU markets for all products, excluding arms and ammunition, for countries listed as Least Developed Countries. The only authorized beneficiary within Latin America and the Caribbean is Haiti that has also signed CARIFORUM-EU EPA in 2009.

3.1 European Union-Mercosur Association Agreement

The Southern Common Market (Mercosur) as a regional integration project was launched in 1991 by signing the Treaty of Asunción among the Southern Cone countries – Argentina, Brazil, Paraguay and Uruguay. It was established during the 'second wave' of regionalism in LAC countries that resulted from the implementation of neoliberal policies since the 1980s (Pařízková, 2016), where one of ten statements is about the elimination of trade restrictions. Renewal of increasing regional integration tendencies since the 1990s in Latin America and the Caribbean (establishment of new or modification of existing integration projects) is also well known as 'open regionalism' that continues until present. The open regionalism consists of two main components – it advocates regional approach to the integration and it promotes openness to other countries, economies or regional groupings (Baquero-Herrera, 2005). In 1995, Mercosur has become customs union with the common external tariff. The purpose of Mercosur is to create a common market. Bolivarian Republic of Venezuela became the fifth Mercosur member state in 2012. However, it has been suspended in all the rights and

obligations of the integration in 2016. The Southern Common Market is the largest regional economic integration project within Latin American and Caribbean region. The GDP of Mercosur countries (excluding Venezuela) amounted 2.489 trillion US\$ in 2018. It made Mercosur the largest Latin American trade bloc. The second largest regional trade bloc is the Pacific Alliance that was established in 2011 comprising Colombia, Chile, Mexico and Peru with the GDP of 2.075 trillion US\$ in 2018 (The World Bank, 2020).

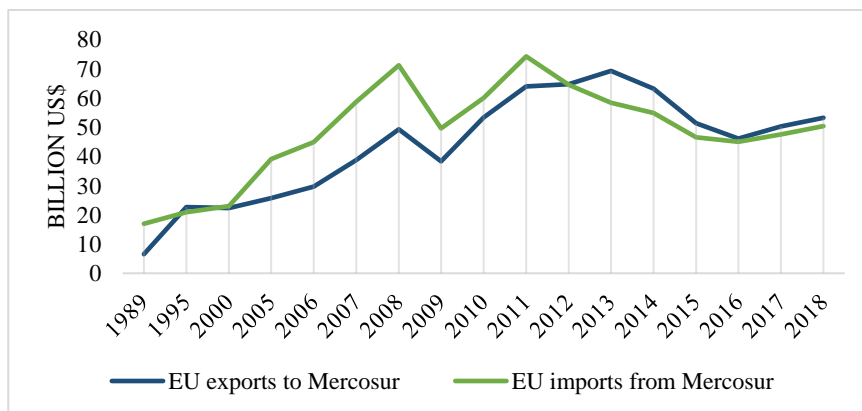
The most remarkable difference between the EU and Mercosur lies in theoretical approach to the integration. While the EU is based on supranational as well as intergovernmental approach, Mercosur is an example of pure intergovernmental model of regional integration where the national states remain the most important actors in the system of international relations. Moreover, it is important to take into consideration the motives for integrating countries. The European integration from the very beginning has been primarily influenced by political, security and then by economic motives, while Mercosur integration is mostly economically motivated. The European Union promotes development of regional integration in developing regions. In Latin American and Caribbean region, the most developed bi-regional relationship is building with Mercosur (Söderbaum, Von Langenhove, 2005). The European Union-Mercosur relations represent pure form of inter-regionalism as one of the prototypes of relations between regional groupings in the world (Hänggi, 2000).

The interregional negotiations between the EU and the Southern Common Market have begun in the 1990s. Between 1990 and 1995, the EU focused on concluding bilateral framework agreements with individual Mercosur founding member states (European Parliament, 2019). Moreover, the EU concluded Interregional Framework Cooperation Agreement with Mercosur that has been in force since 1999. Bi-regional comprehensive association agreement was officially launched in 1999. After many years of stagnation induced by the obstacles in negotiation process, it has been restored after pro-business presidents in Argentina and Brazil have been elected since 2016. In 2018, the negotiators reached the agreement on political and cooperation pillars of more extensive EU-Mercosur Association Agreement. Subsequently, on 28 June 2019, the agreement in principle on trade pillar of the Association Agreement was reached. As a result, there will be gradual trade liberalization through the elimination or reduction of tariffs and other barriers to trade after ratification of the agreement. It also includes bi-regional commitment to protect the environment via effective implementation of Paris Climate Agreement and cooperation on sustainable development. Furthermore, it stipulates protection from imitation as well as respect for geographical indications. The largest threats for the agreement represent negative impacts on the European farmers (criticism from France, Poland, Ireland, Austria and Belgium), the environment impacts (such as deforestation and Amazon fires in Brazil), protection of consumers and leftist governments (e.g. Argentina).

Latin American and Caribbean region amounted only 6% of total extra-EU exports and the EU imported 5.1% of its total imports from third countries in 2018 (Eurostat, 2020). According to that, other developing regions and group of states such as Emerging and Developing Asia, Commonwealth of Independent States, the Middle East as well as Africa have become larger trade partners of the European Union than Latin America and the Caribbean. Brazil is the largest Latin American economy and traditionally the most important EU's trade partner within LAC region. In 2018, Mexico closely overtook Brazil and became the EU's largest trade partner. Mercosur member states amounted approximately 40% of total European Union's foreign trade within LAC region in 2018, despite relatively high Brazilian import tariffs (average customs duty is 13.5%) and other trade barriers. Thus, we can expect the increasing trade volume between the European Union and Mercosur countries after entering the EU-Mercosur trade deal into force. It would raise bi-regional commercial flows after the decline in EU exports and imports since 2012 (see Figure 1). According to Figure 1, the

interregional trade started to increase in the 1990s after the creation of the Southern Common Market as well as in the period of concluding bilateral framework agreements with Mercosur founding members. The trade declined in 2009 for the first time since the 1990s, due to the global financial and economic crises. The second drop in the EU's imports has been the most likely provoked by the slump in the world prices of primary products (see Figure 1).

Figure 1: The EU-Mercosur Trade in Goods, 1989 – 2018, in Billion US\$



Source: author's calculations, based on data from IMF

Bi-regional commercial relations between the EU and Mercosur countries are not symmetric. The EU exports to Mercosur machinery and transport equipment (42.09% of total exports), chemicals and pharmaceuticals (25.96% of total exports) and other manufactured goods. On the other side, the EU imports agricultural products such as meats, foodstuffs, tobacco, coffee, soya, live animals and beverages (34.3% of total imports), raw materials (28.58% of total imports) and fuels and lubricants (Eurostat, 2020). The EU and Mercosur will liberalise more than 90% of their mutual imports over a transition period. It should strengthen the EU's agricultural and mostly higher value-added industrial exports to Mercosur and it is expected to raise notably agricultural imports from Mercosur to the EU. Thus, the EU-Mercosur trade relations may reconfirm Prebisch-Singer thesis on unequal international trade and it might worsen the trade deficit of Mercosur countries (since 2012, see Figure 1). In 2015 and 2016, the world prices of food and agricultural raw materials were low that is the most likely explanation of decreasing EU imports from Mercosur in the same period of time.

4. Conclusion

The analysis of the EU-LAC relations indicates that despite the EU's bilateral ties with Mexico and Chile, relations between regional groupings dominate and the inter-regionalism has become an important tool to reinforce and develop the European Union's external economic relations with Latin American and Caribbean region. Trade pillars of both bilateral agreements with Chile and Mexico have been modernized in order to adopt them to current trends of the international trade. Moreover, there exist one multiparty trade agreement with Colombia, Peru and Ecuador and three interregional trade agreements with CARIFORUM, Central America and Mercosur (as well as bilateral agreements with Mercosur founding member states). The increasing importance of Latin American region in the EU's external relations as well as the interregional approach to the EU-LAC relations has been mostly influenced by:

- Moving to neoliberal policies in Latin America, especially trade liberalization,

- The accession of Spain and Portugal to the European Communities,
- The end of the Cold War and democratic consolidation in Latin American countries,
- Creation of Mercosur as the largest trade bloc in Latin America,
- Open regionalism in Latin American region.

The Union's trade, association and partnership agreements concluded with Latin American countries or regional groupings are based on three main pillars such as political dialogue, trade and (development) cooperation. In comparison to Africa as developing region, there are only two countries with preferential treatment from the side of the EU – Bolivia under GSP+ and Haiti under EBA initiative, in Latin America and the Caribbean. Haiti has become a member of CARIFORUM-EU Economic and Partnership Agreement, however, Bolivia has not become a member of any more comprehensive trade agreement because it benefits unilaterally from GSP+. Venezuela is the only country of LAC region that does not have any trade agreement with the EU as well as any preferential entry to the European markets. The EU-Cuba PDCA is politically motivated and the economic relations are regulated by WTO principles.

The most important challenge in the EU-Latin America and the Caribbean economic relations is to preserve the EU's economic position and market share in LAC region due to rising economic power of emerging markets, especially China, and their involvement in a given region. Despite the remaining geopolitical and economic dominance of the US, Chinese economic involvement in Latin America is increasing rapidly through trade, loans, investment as well as through the extension of Belt and Road Initiative to LAC region. Moreover, China proposes cooperation among countries of the 'Global South' that seems to be more attractive for many developing countries due to 'friendly' conditions of providing investment, loans and trade. On the other hand, protectionist measures of Trump administration, trade tensions, the US-China trade deal, geopolitical situation in the Middle East, trade liberalization between the EU and Mercosur and many other factors can strengthen the EU's geopolitical position and the economic ties between the EU and Latin America and the Caribbean. Nowadays, the largest challenge in EU-LAC economic relations is to ratify the EU-Mercosur trade deal that has several obstacles such as negative impact on European farmers and on the environment, consumer protection and 'economic nationalism' especially of leftist governments. The EU-LAC economic relations have a great potential for the future development. The challenge for the EU is to diversify territorial as well as commodity structure of its trade with LAC countries. There is a space for future research in terms of detailed structure of interregional EU-Mercosur trade, its future perspectives and challenges for strengthening the economic diplomacy after the EU-Mercosur deal comes into force.

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Economic Consequences of Firefighting Trucks Risky Emergency Driving within EU Civil Protection

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Abstract

The Fire Rescue Service of the Czech Republic (FRS CR) is one of the main components of the security forces which are involved in ensuring civil protection in the CR. Its primary task is to protect lives and health of the population in particular from fires and other emergency and critical situations. FRS CR is involved in providing security of both the population of the Czech Republic, and of other countries of the European Union (EU), in the form of special emergency response teams sent abroad. These emergency response teams are registered in the CECIS (Common Emergency Communication and Information System) international database of the European Union. While performing these public services members of the FRS CR need special fire appliances. The first-response group of fire-fighting appliances is professionally denominated as fire-fighting vehicles. Traffic accidents occur occasionally while driving to emergency. Costs connected with these accidents adversely affect the economy of transport and, above all, threaten the operational capacity of fire units. The paper summarizes results of the analysis of the most numerous group of emergency vehicles – water tenders. One of the analysis objectives was to estimate the profile of the driver-fireman who caused the traffic accident.

Keywords: estimation, EU civil protection, fire fighting vehicles, public services, traffic accident, transportation economics

JEL Classification: C13, H41, R41

1. Introduction

The team of authors has been dealing with the issue of traffic accidents of firefighting vehicles for a long time. Fire protection units need these vehicles both for intervention within the Czech Republic, and for cross-border cooperation with neighbouring EU countries or for the creation of special teams built to provide assistance either in EU countries, or in non-member states. These teams are prepared especially for search and rescue activities in collapsed buildings, fire fighting, rescue works during floods and interventions in chemical and environmental accidents. These activities belong to tasks of Fire Rescue Service of the Czech Republic (FRS

CR) in order to eliminate the consequences of emergencies. This assistance is defined in Article 21, paragraph g) of the Consolidated versions of the Treaty on European Union and the Treaty on the functioning of the European Union (European Union, 2010), citing: "assist populations, countries and regions confronting natural or man-made disasters."

In 2018, the team of authors published several findings from previous traffic accidents analyses from years 2011 to 2016 (Jánošík et al., 2018). Unfortunately, in the period 2017 - 2019, the trend in the total number of fire fighters' accidents keeps rising. Therefore, authors decided to continue the research of the firefighting trucks accident rate and to point out some trends and consequences of risky driving to the emergency site.

2. Problem Formulation

The previous analysis, published in Jánošík et al. (2018), was based on the traffic accident assessment used the Czech Police statistics data available on a publicly accessible website (Police of the Czech Republic, 2019). As a conclusion of previous analysis, two hypotheses were set and then verified. Hypothesis 1: Incorrect driving is the most frequent cause of an accident. Hypothesis 2: Drivers under the age of 30 cause the most traffic accidents. These hypotheses revealed the direction of traffic accident studies focused on the cause of the accident and the age of the driver (the culprit). Neither of these hypotheses was confirmed in the analysis. The wrong avoidance (36 % of the total number of accidents) has been detected as the most common accident cause. In the economic point of view, however, the greatest material damage occurred at road accidents due to speeding (75 %). In terms of the fire fighters drivers' age, drivers in the age group of 30 to 39 years caused the majority of traffic accidents, followed by drivers aged of 40 to 49 years. Therefore, the next analysis was extended to study the effect of driving experience.

Thus, the current analysis was not based on hypotheses. It was focused on causes, consequences and developmental trends, instead. The trends in accident rate, number of emergency events and operational load of fire trucks and their changes during the period 2011 and 2019 were monitored.

3. Methodology

The procedure and methods were identical as in the previous analysis. Forms "Fire Accident Reports" served as a source of primary data. Machine service technicians in regions, territorial departments and individual fire stations processed these reports according to the Machine Services Order (Fire Rescue Service of the Czech Republic, 2006). The analysis was based on the following criteria for selecting traffic accidents:

1. The traffic accident character – accident caused by firemen.
2. The purpose of the ride – emergency ride.
3. The type of fire appliance – water tender.

The completed forms "Traffic Accident Reports" were centrally collected at Directorate General of Fire Rescue Service of the Czech Republic (DG FRS CR). Reports were processed in MS Excel. The centrally collected data were provided to the authors and processed, thereafter. Elementary filtering functions in MS Excel were used to sort records according to the above criteria. Between 2011 and 2019, a total of 318 traffic accidents were evaluated. The statistical yearbooks published annually by DG FRS CR (publicly available on the web) have

been used to compare the tendency of the number of incidents and the operational load of fire trucks (General Directorate of the Fire Rescue Service of the Czech Republic, 2019).

4. Problem Solution

The results of the analysis of traffic accidents obtained according to the above criteria, recording development trends and loading of fire vehicles in relation to the number of emergencies are shown in the following tables and graphs.

4.1 Causes of Traffic Accidents

First steps in solving the task were focused on filtering traffic accidents according to the cause of their occurrence. An overview of the frequency of traffic accidents according to the causes of traffic accidents of water tenders when emergency driving is summarized in Table 1. The total proportion of individual causes for the reporting period 2011 to 2019 is shown in Figure 1.

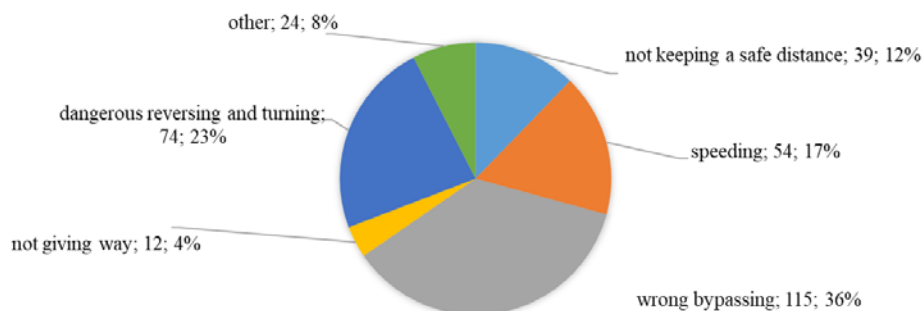
Table 1: Causes of Traffic Accidents

	2011	2012	2013	2014	2015	2016	2017	2018	2019
not keeping a safe distance	4	6	5	2	3	3	5	6	5
speeding	5	3	8	9	6	4	10	5	4
wrong bypassing	5	6	11	13	10	10	20	17	23
not giving way	1	0	0	1	1	2	3	0	4
dangerous reversing and turning	9	8	11	6	6	8	9	10	7
other	2	0	3	5	3	1	1	2	7

Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

In the reported period, most traffic accidents were caused by wrong bypassing. These 115 traffic accidents make 36 % of all registered traffic accidents.

Figure 1: Shares of Particular Traffic Accident Causes, Years 2011 – 2019



Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

4.2 Value of Damage in Traffic Accidents

The next part of the analysis was aimed on assessing the damage to fire trucks. Table 2 summarizes the damage caused to fire-fighting cars during the reference period 2011 to 2019 sorted by cause of traffic accidents. Figure 2 shows the cause of traffic accidents, the amount of damage and its percentage share of the total amount of damage occurred in the period under review.

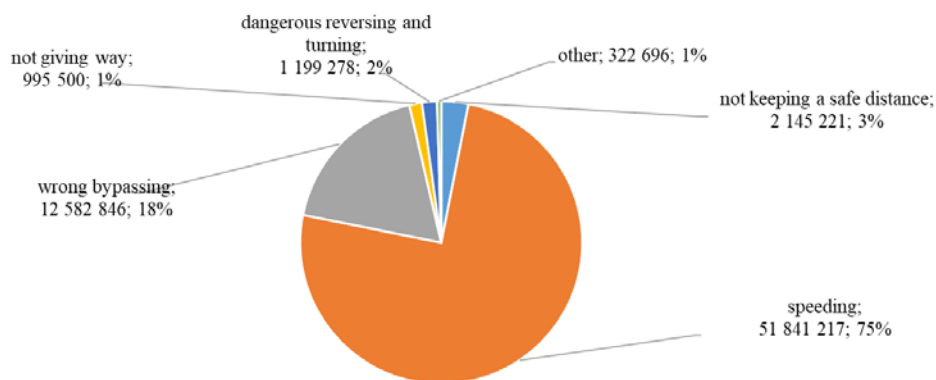
The most serious cause of traffic accidents in terms of the amount of damage was speeding. These accidents represented 75 % of all damages in comparison to only 17 % of the total number of traffic accidents. This single cause out of the 6 categories of causes significantly affects the overall outcome. In a very simplified way, the result corresponds with the Pareto 80/20 rule, here.

Table 2: Damage to Firefighting Water Tenders by the Cause of Traffic Accident (in thousands CZK)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
not keeping a safe distance	38	319	390	13	16	71	351	210	1 342
speeding	1 110	4 562	4 389	13 219	13 915	241	5 554	8 204	2 420
wrong bypassing	49	146	703	159	103	332	7 566	3 969	764
not giving way	100	0	0	320	190	106	260	0	780
dangerous reversing and turning	169	178	254	170	203	532	325	566	98
other	34	0	36	133	516	55	38	250	138

Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

Figure 2: Damage to Firefighting Vehicles by the Cause of Traffic Accident in 2011 – 2019 (in CZK)



Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

4.3 Length of Drivers' Experience

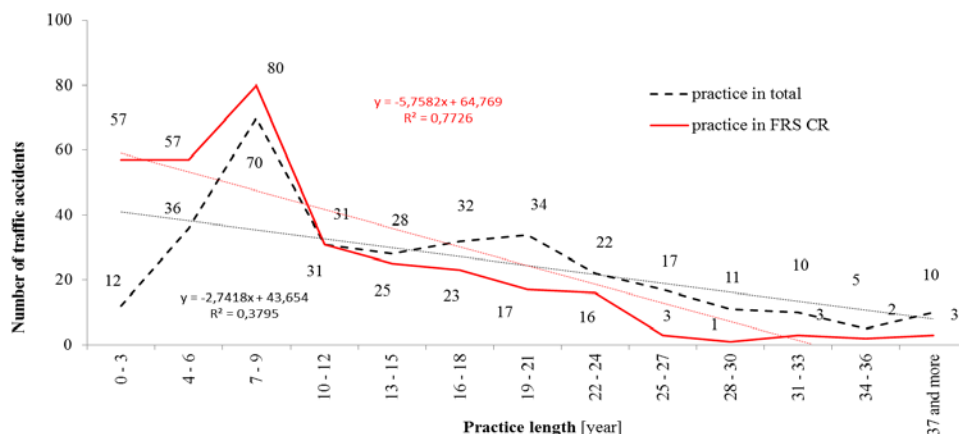
The third part of the analysis was focused on the number of traffic accidents analysis in terms of the length of drivers' experience in truck driving. The drivers' practice was evaluated in two categories:

1. Practice in driving fire vehicles at the FRS CR,
2. Overall truck driving experience (i.e. the sum of the practice length before joining the FRS CR and the driving experience at the FRS CR).

In order both to record development trends, and to illustrate the relationship between the length of practice and the number of traffic accidents, 3-year intervals of the driving experience were set. The overall results of traffic accidents distribution, for the period 2011 to 2019, in relation to the respective interval of the both monitored categories of the driving practice length are shown in Figure 3.

Drivers with the practice length at the FRS CR from 0 to 9 years caused 61% of all traffic accidents during the period under review. With reaching the driving experience 10 years or more, the first positive breakeven point occurs. There is a drop down from 80 traffic accidents (within the group of drivers experienced lesser than 9 years) to 31 traffic accidents in the group with practice longer than 9 years. The second positive breakeven point can be seen at the drivers experienced 25 years and more, where there is a decrease from 16 to 3 traffic accidents. The drivers with the practice longer than 27 years caused 1 to 3 traffic accidents per each 3-year interval, during the monitored period.

Figure 3: Number of Traffic Accidents in Relation to the Truck Driver's Practice



Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

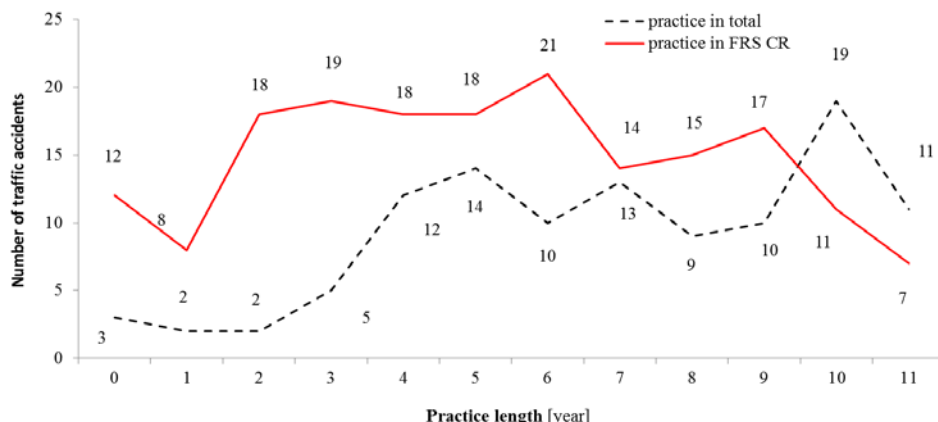
Unfortunately, the results confirmed the data from the previous analysis. There, the majority of accidents reported for drivers with the 4-6 year experience at the FRS CR. In the meantime, that risky group of drivers grew aged 3 years. The traffic accidents caused by these drivers moved to the interval 7 to 9 years of driving practice. Detailed year-by-year practice of this risk group is shown in Figure 4.

Thus, several questions arose about the future trend of traffic accidents in the monitored categories. The first one is, whether this unfavourable peak will disappear from the statistics in the longer reporting period. Or will it just shift over time, as this risky group will age? Or, these drivers who haven't had any traffic accident yet will gain enough experience in the next 3 to 5 years and follow the trend of their current predecessors in a reduction of the number of

accidents? Concurrently, we can only believe that this unfavourable trend in the number of traffic accidents will not be overcome by the next young generation of drivers who have zero driving practice. This suggests a positive finding of a lower number of traffic accidents at younger driver groups with a practice lesser than 1 year.

The 0 to 9-year driving experience at the FRS CR should be a subject of future detailed analyses, focusing in detail on the causes of these accidents.

Figure 4: Number of Traffic Accidents in Relation to the Truck Driver's Practice

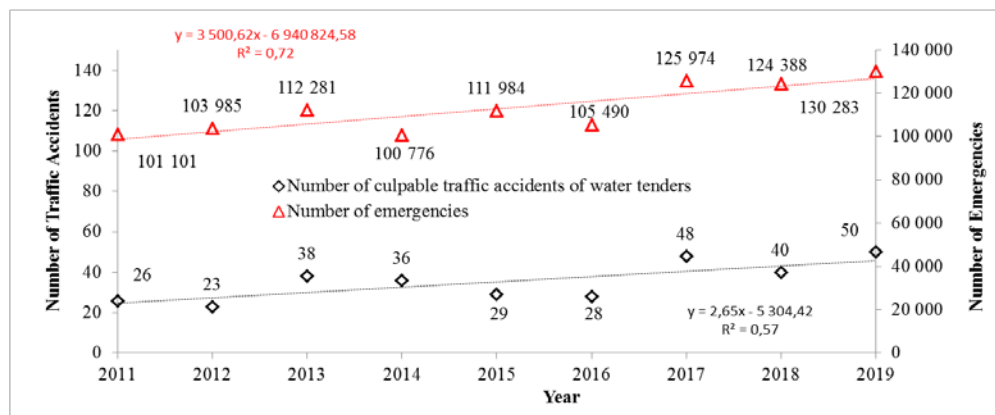


Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

4.4 Number of Emergencies and Traffic Accidents

The next part of the analysis compares annual statistics of emergencies (General Directorate of Fire Rescue Service of the Czech Republic, 2019) and evaluated traffic accidents. Figure 5 summarizes the development of the total emergencies number, in each year of the reporting period, and 318 accidents caused by drivers of water tenders. In the reporting period, there were 620 registered traffic accidents, regardless of the vehicle type and the cause of the accident.

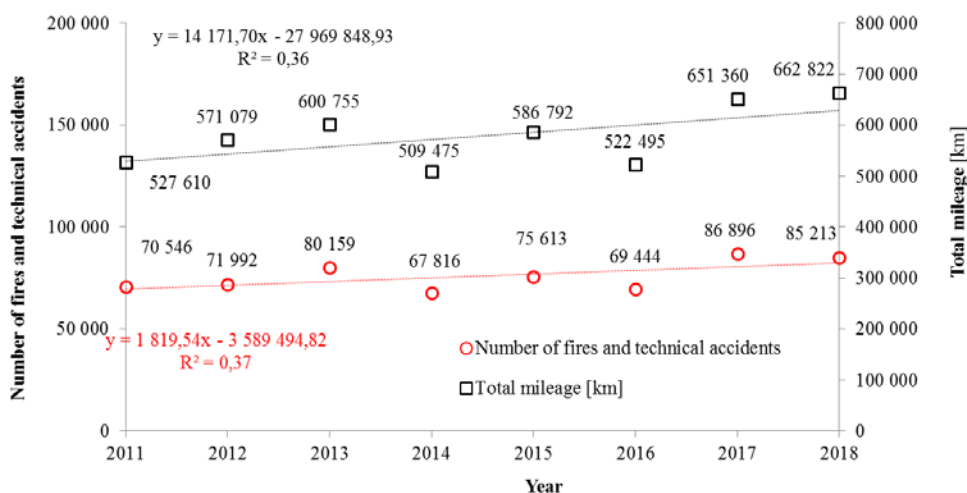
Figure 5: Development of Emergencies and Traffic Accidents during 2011 - 2019



Source: own research based upon data from Directorate General of the FRS CR (2011-2019)

Both values show slight growth trends. On average, there is one traffic accident per 3,348 incidents, in the reporting period. This part of the research was followed by an analysis of the emergencies statistics and the distance travelled by fire vehicles through the emergency rides. Since the data of 2019 have not been available to the paper submission deadline, the reference period is 2011 – 2018 only. In statistical yearbooks (General Directorate of Fire Rescue Service of the Czech Republic, 2019), mileages were reported for fires and technical accidents. On average, these two types of emergencies account 69 % of the total number of emergencies, in the period 2011 - 2018. The resulting trends are summarized in Figure 6. Hence, the average distance per incident was 7.6 km. In relation to the total number of emergencies, the average mileage per one traffic accident was 25,500 km.

Figure 6: Number of Fires and Technical Accidents and the Mileage in 2011 - 2018



Source: own research based upon data from Directorate General of the FRS CR (2011-2018)

5. Conclusion

During the performed analysis of culpable traffic accidents of firefighting water tenders in the period 2011 to 2019, partial conclusions were also presented. In total, 318 traffic accidents were analyzed with a total loss of CZK 75.6 million. The results could be summarized in the following findings.

1. Most frequent cause of traffic accidents was the wrong bypassing - 115 traffic accidents (36 %).
2. In terms of damage to fire vehicles, the most important cause of traffic accidents was speeding - CZK 51.8 million, 54 traffic accidents (75 %).
3. According to the length of experience in driving trucks at the FRS CR, the drivers with experience from 0 to 9 years have caused the majority of accidents.
4. The evaluation of emergency events statistics showed that one traffic accident occurs per 3,348 emergency drives. After conversion that results to the travelled distance that is 22.5 thousand km per one traffic accident.

As an epilogue, one sad finding emerged from the analysis of traffic accidents statistics. In the monitored period 2011 – 2019, 4 fire-fighters and 4 other road users died. 7 of these deaths (4 fire-fighters and 3 other road users) happened in the period 2015 - 2018. Of the total crashed

vehicles, 5 were water tenders. Speeding was the cause at 5 traffic accidents. The total damage to fire vehicles was estimated for about CZK 15.5 million. The optimistic finding was that no one did perish at the traffic accidents of vehicles of the FRS CR, in the year 2019.

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European Union and Small Autonomous Regions' Interest Representation – Cases of the Åland and Faroe Islands

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Abstract

The European Union has a substantial influence on the functioning and economic prosperity of entities in its vicinity. This is especially true for small entities, such as small autonomous regions of the EU Member States. These regions are theoretically able to govern themselves, but the existence of a specific legal and economic regime of the EU, which has competence in many areas of economic importance for the regions, highlights the need for effective interest representation of the regions in “Brussels” – which is something the Member State-centered legal system of the EU hardly takes into account. The paper focuses on two specific autonomous regions on the EU's margins – the Åland Islands (part of the EU) and the Faroe Islands (not part of the EU). By employing comparative analysis, the paper shows, including in historical perspective, how small regions are able to have their voices heard in the complex EU arena.

Keywords: Åland Islands, European Union, Faroe Islands, interest representation

JEL Classification: F13, F55, K33

1. Introduction

Small state or autonomous regional entities have enjoyed significant academic attention for a long time. Their ability to survive and, perhaps even more so, to prosper (Armstrong, Read, 1995) in a world dominated by regional and global (super)powers does not cease to impress the academia. At the same time, being comparatively very small, these entities are often overlooked by the media, not to mention international relations.

Europe is a very specific game field in terms of politics and international relations. This is mainly due to the existence of a large number of small and medium-sized states (compared to the global arena), which have waged wars against one another for centuries and which were able and willing to restraint themselves voluntarily and give birth to a complex system of never-ending negotiations that we call today the European Union.

The European Union is often described as a *sui generis* entity (which says nothing at all in itself), a combination of an intergovernmental and a supranational body with its own, often very complex institutions, procedures and legal regime. From an international legal point of view, however, the EU is based on a number of international treaties, concluded by the main constituent elements of international law – states. It is the states that have agreed to create the EU. And inside those states, it is the (central) executive that is entrusted with negotiating international treaties, among others also the EU founding treaties.

This has serious repercussions for the EU, its member states, but also for entities inside the member states. The member states are represented in the EU by their governments. This gives the governments a very strong say over, for example, the legislatures. But it also strengthens the central governments vis-à-vis sub-state entities. At the same time, it is the governments that are responsible, vis-à-vis EU institutions, for the correct application of membership obligations. This institutional and legal setup highlights the need for effective interest representation of actors other than the central governments.

Small autonomous regions of EU member states find themselves in curious situations. If the region is part of the EU, the autonomous region has the obligation to apply EU law and, at the same time, is not entirely responsible for it vis-à-vis the EU. The central government, on the other hand, is responsible to the EU for the correct application of all its obligations stemming from EU membership but has limited to no say over matters occurring on the territory of its autonomous region. If, on the other hand, the autonomous region does not constitute a part of the EU, but the state it is part of does, a different set of potential problems arises. It is not difficult to imagine a situation, where a member state's obligations vis-à-vis the EU and vis-à-vis its own (autonomous) region collide. In such situations, the potential damage is lower if the state sides with the EU (e.g. to avoid a fine imposed by the Court of Justice of the EU), at the expense of its own region (where damage is mostly only political). The question here is the following: what possibilities do the small autonomous regions of EU member states have to make their voices matter in EU-related matters?

2. On the Methods of the Paper

This paper focuses on small autonomous regions of EU member states. Small means they are significantly smaller in terms of population than the state they form a part of, as well as compared to other European states. Autonomous means they have their own institutions of self-governance, distinct from central state institutions, which have sovereign authority and legislative power at least in certain of policy areas, independent from the central state level. One can find such regions in federal (Germany, Austria, Belgium) or quasi-federal states (Spain, Italy), but also in unitary states, which for historical reasons have one or several autonomous regions (Portugal, Denmark, Finland). The latter group is the most interesting academically since these states are not "structurally used to" dealing with powerful sub-state actors. Thus, regions from this group will be chosen.

The paper is constructed as a comparative analysis of two distinct cases. The cases are chosen to reflect the most extreme situations that are available in the EU – 1) an autonomous region of an EU member state that itself constitutes a part of the EU, and 2) an autonomous region of an EU member state that is itself outside the EU. In terms of 1), Åland Islands will be looked at, concerning 2) we will choose the Faroe Islands.

In the following chapter, general interest representation of small entities in the EU arena will be brought to the reader's attention. Then, each case will be elaborated on separately. The results of comparative analysis will then be provided in the conclusion.

3. Making the Voices of the Small Heard in the EU

Certainly, this division of powers in EU affairs has been a point of interest for many – from scholars to politicians. It has also been a source of internal political problems in the Member States. The EU as a whole tried to react and "upgrade" the position of sub-state entities in terms of representation in the EU.

3.1 European Committee of the Regions

The most visible change is surely the creation of the European Committee of the Regions by the Maastricht treaty. This 350-person strong assembly is supposed to be the direct representation of sub-state entities in the EU arena. It consists of representatives of the European regions, it has its own seat, inner structure and administrative staff, it receives a part of the EU budget for its functioning. It is compulsorily consulted in all matters, including in legislative procedures, that have consequences for the sub-state level. It is also one of the guardians of the subsidiarity principle. The Committee is also party to the official communication between EU institutions, e.g. the Commission usually addresses also the Committee of the Regions in its (increasingly important) Communications.

At the same time, although the Committee is firmly a part of the EU decision-making procedure, the voice of the Committee, though strong symbolically, has limited meaning. To put it brutally frankly, the co-decision makers need not take its views into account. Its position is also limited by the fact, that it is not the only consultative body of this type in the EU legislative process – the other being the very similarly constructed European Economic and Social Committee.

3.2 Participation in Council Work

The Council (of the EU) is the institution, in which interests of the member states are represented. It used to be called “Council of Ministers” to highlight the fact that it is the ministers, i.e. members of the member states’ governments, that constitute this institution. However, the Maastricht Treaty changed the provision of Council representation to a more general one. According to the current wording of the Treaty on European Union, the Council consists of representatives of member states who may commit the government. The specific representation, then, is up to the internal procedures of the member states to decide – it is a matter of who exactly may commit the government. In some member states, it is only the members of the government (ministers), in others, it may be other persons – such as ministers of federal entities. This possibility is often used by the federal states, especially Germany.

The Council, however, is a structured body and the representation is fixed by the Treaties only for the ministerial level. At the same time, the majority of the day-to-day work is carried out at the Working Party level. Here, the internal procedures of the Council include the possibility of a member state being represented by a representative of a region. These provisions are also routinely used especially by federal member states, especially when matters especially important for the federal entities are being discussed.

3.3 Informal Influence – Regional Representations and Regions’ Networks

Another possibility of autonomous regions to make their voice heard is by a direct representation “on-site” in Brussels. Although such representation lacks official recognition and status (as enjoys e.g. the permanent representations of member states), it is a very effective tool for informal lobbying. That is why a number of sub-state entities have decided to send their representatives to the EU capital, where they are able to meet with EU and member state representatives on a daily basis, but also to organise awareness-raising events on issues of importance to the given region.

However, such practices are extremely costly and only larger and richer regions are able to finance them – such as the German federal entities, from Czechia, for example, the City of Prague. Some regions join forces either with the central administration, or with one another,

and create a common representation (as was the case in the past with a number of Czech regions). But for the smallest of them, an even more effective possibility exists. It is the representation by an informal pan-European network. Regions with legislative powers have two such networks – RegLeg and CALRE.

4. The Åland Islands and Case C-343/05 (Commission v Finland)

The Åland Islands are an autonomous region of Finland. It is an archipelago in the southern part of the Gulf of Bothnia, midway in between Finland and Sweden. It has a population of almost 30 thousand and a Swedish-speaking population. Its autonomous status stems from conflict during the First World War turmoil when the Swedish-speaking population tried to (re)unite with the Kingdom of Sweden. The newly independent Finland refused this but offered a wide-ranging autonomy in return. This solution was later also advocated by the League of Nations (this conflict would become the only one this body successfully solved). Åland thus has its own legislative assembly (Lagting) and a government (Landskapsregering). It also enjoys a right to a specific domicile status – only a Åland-born Finnish citizen or a Finnish citizen speaking fluent Swedish and lives in Åland legally for at least 5 years may vote and be elected in the Åland regional elections, as well as conduct business in Åland. Also, Swedish is the only official language in Åland. Åland autonomy bodies have exclusive competence to adopt legislation for Åland on issues, such as healthcare, education, agriculture, fisheries, environmental protection, rural development, culture or public order (Finlex [online], n.d.). The population of Åland votes one member of the Finnish parliament. The authority of Finland is represented on Åland by a governor appointed by the President of the Republic. Relations between the central government and Åland are given by the Finnish constitution and by an autonomy act, which may be amended only with the consent of Åland (Finlex [online], n.d.).

Åland discussed whether it should enter the EU in 1995 when Finland applied for membership. After lengthy discussions, Åland membership was approved after two specific derogations from EU *acquis* were granted – 1) Åland may keep its domicile status, which would otherwise be illegal under EU free movement of persons; and 2) Åland remains outside the EU tax area, thus enabling the economically-critical onboard duty-free sales on vessels cruising between Åland and Finland. Since 1995, thus, Åland is part of the EU together with Finland. Its population votes in the European Parliament elections, but does the territory is not a specific constituency, i.e. Åland does not send “its own” member to the EP. Nevertheless, a Åland-originated politician had been elected in the past on a national list (Silverström, Koskelainen, Brady, 2005).

In terms of EU matters, Åland has competence in many areas, where there is a competence of the EU. Therefore, it is important for Åland to make its voice heard. Since it is the Finnish government that represents Finland in the EU, but it is Åland that has competence in many EU-relevant areas, the relationship between the central and the Åland governments was specified by a novelization of the autonomy act in 2004. Based on this novelized autonomy act, Åland bodies are forwarded newly published EU documents, so that Åland position may be prepared. Åland representatives are involved in the work of the Finnish government’s Committee on EU Affairs, where Finnish national positions are formulated (Silverström, Koskelainen, Brady, 2005, p. 27-28). The national position is also co-formulated by the Finnish parliament, specifically by its Grand Committee, where the Åland-elected member may always participate in debates and decision making on a matter affecting Åland (Parliament of Finland [online], n.d.). This is not without problems, naturally. Apart from the fact that positions of Finnish and Åland representatives may diverge, there exists, quite surprisingly, a language barrier. Swedish is spoken on Åland and it is also one of the two official languages

of Finland. However, the working language of Finnish institutions is Finnish, thus also EU-related meetings are held in, and their minutes are drafted in, Finnish – which is not the language of Åland (Spiliopoulou Åkermark, 2008, p. 56).

In terms of representation in Brussels, Åland does not have its own representation. However, a single policy officer is “reserved” for Åland matters at the Finnish Permanent Representation to the EU (Silverström, Koskelainen, Brady, 2005, p. 25). Åland is an active part of RegLeg and CALRE, which compensates for its inability to send its own personnel to Brussels in part.

The problem of adequate interest representation of Åland may be documented by the Case C-343/05 (Commission v Finland) concerning the ban of the so-called oral tobacco (chewing tobacco). This product, known as “snus” in Swedish, was considered a traditional commodity of Åland and a significant source of income, both on Åland and on-board vessels registered on Åland cruising between Åland and Finland. However, in 2001, the EU adopted a directive banning all oral tobacco from being placed on the market in the EU. Since Åland is in the EU, the ban also applied here. Åland refused to comply with the new obligation and took no action. In 2002, the Commission initiated the infringement procedure against Finland, since it is the member state that is responsible for transposition of EU law. From the Finnish point of view, though, Finland had to say over transposition of the EU directive on Åland (Spiliopoulou Åkermark, 2008, p. 46-47).

In 2005, the matter was brought before the EU Court of Justice. Finland practically sided with the Commission, admitting that it had failed to comply with EU law. With no significant counterarguments, then, in 2006 the judgement was issued, stating that Finland failed to comply with EU law, because of ongoing “snus” sales on Åland (Court of Justice of the EU [online], 2005). Åland tried to formally transpose the directive while leaving a possibility of “snus” sales onboard the Åland-registered vessels in international waters. In 2007, therefore, the Commission initiated a second infringement procedure against Finland. This time, however, the judgement may have meant a fine. The Commission proposed a lump sum of more than 2 million EUR, plus almost 20 thousand EUR per day until Åland transposed the complete unlimited oral tobacco ban (European Commission [online], 2007).

It was only here that the Åland government bowed and transposed the directive in full. This was doubtless because of the provisions of the autonomy act that orders Åland to pay for damages incurred on Finland, if Åland obligations are neglected – which would surely be the case. However, the bitter taste of Finland practically siding against its own region persisted.

5. The Faroe Islands and the Meckerel War of 2010

The Faroe Islands are an autonomous territory of the Kingdom of Denmark. It is comparable to Åland in terms of population (although the Faroes are a bit larger) and overall geographical characteristics, with the distinction that the Faroes are located in the open seas, in the Atlantic Ocean, midway between the British Isles and Iceland. This historically Norwegian territory became part of the Danish realm together with Scandinavian Norway over the course of history. The Faroese home rule is more recent than that of Åland, it dates from 1948. The autonomy has been widened over the course of the past decades, with the possibility of full sovereignty being still on the table (Solvará, 2016).

The Faroe Islands chose not to join the then EEC when Denmark applied in 1973 and has remained outside the European integration structures ever since. The main reason was economic, i.e. the Common Fisheries Policy that would have had disastrous consequences on the Faroese economy (Adler-Nissen, 2014, p. 56-57). This is what makes the main difference from the previous case. Faroe-EU relations are governed a free trade agreement and a small

number of other sectoral treaties (Brunclík, Havlík, Pinková, 2011, p. 231). Faroese-EU trade relations have been elaborated on in this forum in the past into more detail (Juhás, 2018). The fact that the Faroes are not part of the EU today does not mean that efficient interest representation is not needed from the Faroese side. The EU is still the biggest market for Faroese exports and there is another important topic of a more symbolical value – the sovereignty question is very sensitive for the Faroese population and the EU is regarded as one reference point, a possible future anchor for a possible newly-independent Faroese Republic. The Faroese government thus chose to open a diplomatic representation to the EU in Brussels. This was done in 1998 in cooperation with Denmark, which hosts the diplomatic mission in the seat of its Permanent Representation (Adler-Nissen, 2014, p. 57). Since they are not an EU territory, the Faroes have no formal participation in EU institutions or EU-associated networks, such as RegLeg. This does not, however, mean that informal contacts are not being carried out.

Relations between Denmark and the Faroes are sensitive, partly due to the complicated history of an independence referendum in the 1940s that Denmark refused to accept, but mainly due to the so-called Great Bank Affair of the 1990s. In the economic downturn of the Faroes' economy in the 1990s, Denmark provided a bail-out for the Faroese government. At the same time, the Danish owner provided a bailout for the largest Faroese bank that faced bankruptcy and then sold a controlling stake to the Faroese government. However, shortly afterwards, the Faroese bank needed another bailout, that the Faroese government had to pay with a second loan from the Danish government. This led to a de facto suspension of home rule in financial matters when the Faroes were forced to enter an IMF bailout program (Adler-Nissen, 2014, p. 61-62). This history is still remembered and actions by Denmark in the EU sometimes spark another controversy.

The Faroes' main export article in fish and fish products, the biggest export market being the EU. In 2010, the Faroese government unilaterally increased the fishing quotas significantly in the Faroese exclusive economic zone, together with Iceland (Reuters [online], 2007). Commercially, this situation meant an opportunity for the Faroes to increase their market share and support the economic growth of the whole economy, still significantly dependent on this one sector. However, this would mean increased exports to the EU, where the Common Fisheries Policy is one of the most sensitive EU policies, as it tries to strike a delicate balance between the interests of the different "fisheries states". Also, this was criticised as being short-sighted in sustainability terms.

The EU tried to respond by imposing "sanctions" on the Faroes. These would consist of a ban on landing the catches of Faroese ships in EU ports. This would harm the Faroes considerably in economic terms. When the legal instrument in this sense was put to vote in the Council, Denmark did not defend the Faroese position. In the Council vote, Denmark abstained. Moreover, the Danish political representation went so far as to openly criticize the Faroese government for their steps (Adler-Nissen, 2014, p. 66). The Faroese thus found themselves unrepresented by their own central government in EU matters, which reduced mutual trust even further.

6. Conclusion

This paper addresses the question of possibilities for interest representation by small autonomous regions of EU member states in the EU arena. We have seen that both a region inside the EU, as well as a region outside the EU may find ways for both formal and informal representation, be it a direct diplomatic representation or a membership of a wider network that provides "lobbying services" for its members. Certainly, the region inside the EU has *de*

iure wider possibilities to make its voice count, stemming from the possibility to send representatives to the Committee of the Regions, or even Council bodies.

However, it must be noted, that the possibilities by regions to represent their interests effectively and successfully are to a high degree dependent on the stance of the central government of the member state in question.

As the Åland-related case C-343/05 showed, even though Åland can, in theory, make its voice heard in Brussels, it has a very weak position vis-à-vis the EU institutions. This is even more so the case when the interest of the region and of the central government do not converge, such as was the case in the “snus” court proceedings. The Faroese case documents the same issue. Even though fishing is of paramount importance to the Faroese economy, Denmark did not side with its own region and did not oppose the adoption of “sanctions” at Council level (though it acted diplomatically by not supporting them fully).

Therefore, although various possibilities enable small autonomous regions of EU member states to represent their interests in the EU arena, the key issue at stake is the support of the central government. Thus, the conclusion of this paper is that for key issues of vital interest to the autonomous regions, the support of the central government is a *sine qua non* condition for success at EU level, regardless of the region’s own position in the EU.

Having in mind the above mentioned, the dynamics between the state and its autonomous region seems to be affected considerably by the need to function in an increasingly complicated arena, including the EU politics. However, this goes beyond the scope of this paper and it may be a topic for future research.

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Evaluation of Electronic Economy Development in Poland and the Czech Republic on the Background of the European Union

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Abstract

The article presents an assessment of the development of electronic economy in Poland and the Czech Republic against the background of other European Union (EU) countries. The analysis of statistical data essential characteristics of the development of e-economy in both countries. An analysis of the current situation of the e-economy in Poland and the Czech Republic was carried out based on a comparison with EU Member States. As part of the article, an attempt was also made to identify the basic determinants that affect the ranking of countries in the global NRI index. Based on the analysis of both countries, recommendations were given regarding the possibilities of faster development of e-economy. At the same time shown the impact and importance of e-economy in the contemporary socio - economic EU countries.

Keywords: e-economy, European Union countries, information society, NRI index

JEL Classification: F52, I38, L14, L96, M15, O33

1. Introduction

The electronic economy affects every area of socio-economic life and modernizes traditional activities by using ICT (Information and Communication Technologies) in all branches of the economy. It is estimated that there are over 3 billion Internet users in the world, and almost 8 trillion dollars a year flows via e-commerce, which is a subset of the electronic economy (McKinsey, 2013). During two decades, information technology has changed the social and economic reality. For the SME sector, the use of the Internet in business translates into a 10% increase in efficiency, with almost 25% of companies in this sector declaring that they cannot

conduct business without using ICT (Brown, Court and Willmott, 2013). The Internet is a huge mosaic, consisting of millions of daily transactions and online communication via mobile devices, as well as tool and entertainment application downloads. However, it is not entirely clear how, and above all, to what extent the Internet contributes entirely to global growth, productivity and employment. The data presented in the article help explain the existence of a direct relationship between the Internet and economic activity. By accessing the Internet, Poland and the Czech Republic have entered a new stage of economic development, into the phase of electronic economy. The revolution associated with the introduction of modern information technologies in the sphere of enterprise management can be compared with the industrial revolution in the sphere of means of production (Beyers, 2002). The concept of the new economy (e-economy, electronic economy) is inseparably connected with the concept of the Internet (Miciuła, 2014). It has irrevocably changed the face of modern business, and we must take into account that we are only at the beginning of these changes (Antal, 2018). Market globalization is gaining unprecedented momentum (Spengler, 2000). When choosing a partner, the geographical factor is negligible. Products and services are available regardless of the physical location of sellers and buyers. They select themselves through global online auctions and so-called business marketplaces.

The Polish and Czech IT (Information Technology) market is growing much faster than the entire economy. The electronic economy is a strong market with stable growth, but attention should also be paid to the fact that the IT sector is the flywheel of the economy. The Internet is a key element in the development of the modern economy, contributing to the increase in business efficiency and effectiveness, new jobs, and to the increase in the standard of living and new social and economic opportunities.

The aim of the article is to assess the development of e-economy in Poland and the Czech Republic against the background of other EU Member States. This is of fundamental importance, because e-economy covers all economic sectors, regardless of whether their product is a tangible or intangible product. This creates a new economic and social order in which new entrepreneurship rules and new technologies are closely related.

2. Problem Solution

Information technology is a key element of new forms of business activity. Development of internet and ICT instruments changes processes occurring within enterprises, between them, in dealing with individual clients, and even between clients themselves. Basic processes, such as order processing, payments, promotion and delivery, can be implemented electronically. That is why the analysis of the development of electronic economy is made on the basis of data informing about the use of ICT by basic economic units (small and medium enterprises sector and households).

2.1 The Development of E-economy in Poland and the Czech Republic Through the Prism of Enterprises and Households Against the Background of EU Countries

The emergence of the Internet and globalization of the economy create an opportunity for expanding market activity to include small and medium-sized enterprises. This equalizes the opportunities in accessing information, winning orders and competing. Knowledge and technology appear as the basic factor dynamizing social and economic development. Intellectual capital has gained key importance for development, becoming the main success factor, affecting the transformation of the environment and increasingly stronger competition (Miciuła, 2016). The implementation of information technology and having qualified staff intensifies the activity of enterprises, affecting the ability to operate in a virtual space that is part of the electronic economy (Dudek, 2011). However, new technologies are also a factor

destabilizing the business environment and the need to adapt to change (Wrycza, 2010). In the era of the information society, in which information is treated as a special intangible good, often more valuable than material goods, the e-economy provides irreplaceable analytical tools supporting decision-making processes. The dynamic development of the information society and the growing demand for better quality of ICT services and products have become the cause of widespread development of the electronic economy in various areas of life. In the conditions of growing openness of the economy and globalization processes, the Polish economy is subject to ever stronger influences of the external environment, which is also reflected in its development trends related to the global economic situation. As part of the implementation of the objective, the state and structure of the current electronic economy in Poland and the Czech Republic will be analyzed on the basis of statistical data and indicators presented in table 1, which present basic information on information and communication technologies used by households and enterprises.

Table 1: Basic Characteristics of E-economy Development in EU Countries in 2018

E-economy factor	Poland	Czech Republic	EU – 28	Leaders
Enterprises				
Percentage of those using computers	94,7%	97,1%	97%	100% (Finland, Sweden, Netherlands)
Internet access	94,5%	96,8%	96%	100% (Finland, Netherlands, Lithuania)
Broadband Internet Access	91%	92,4%	92%	100% (Finland, Netherlands)
Mobile internet access	68%	73%	71%	92% (Sweden)
Percentage providing its employees with mobile devices	64%	67%	63%	89% (Finland, Danmark)
Employees using a computer with internet access	45%	53%	51%	71% (Sweden, Danmark)
Number of employees regularly doing part of the work for the company from home, with the option of using the company's ICT resources	18%	23%	26%	38% (Finland, Sweden)
Having their own website	69%	74%	72%	88% (Finland)
Utilizing social media	27%	32%	36%	66 % (Malta),
Placing orders via computer networks	32%	52%	41%	70% (Danmark)
Receiving orders via computer networks	15%	27%	19%	27% (Danmark, Czech Republic)
Using ERP systems	24%	29%	31%	48% (Belgium)
Household				
Percentage of regular computer users	69%	74%	72%	97% (Iceland)
Internet access at home	80%	82%	81%	96% (Netherlands)

Source: (Eurostat, 2019).

In 2018, 94.7% of enterprises in Poland used computers, including almost all large entities (99.8%). In the SME (Small and Medium Enterprises) sector we have 93.7% and 99% respectively using computers. In the Czech Republic this percentage is higher and in the total value is 97.1%, which is higher than the EU-28 average. However, in terms of enterprises' access to the Internet, the total value in Poland is 94.5% and in the Czech Republic 96.8%. In

terms of value in the Czech Republic, we often have slightly higher figures than the average of 28 EU Member States. In Poland, these values are slightly lower, but an upward trend is visible. Analyzing regional data in Poland, the largest distance between enterprises with Internet access by voivodship is a maximum of 5 percentage points. (91.6% and 96.5%). This indicator gives the picture of levelling inequalities in the development of regions in the country in terms of the possibility of access to the Internet by enterprises. Compared to the EU, the results achieved are approaching the EU-28 average. This is influenced by the population and size of the country, which is also often demonstrated by other smaller countries, which become leaders of the ranking under various criteria.

Widely available Internet creates wide communication possibilities in the social, cultural and business sphere. It removes time and geographical restrictions, thus changing the way businesses operate. Effective electronic communication is possible thanks to appropriate access connections, especially broadband - in Poland they are already used by 91% of enterprises, and in the Czech Republic by 92.4%. The access to the Internet has changed in recent years due to the rapid development of technical capabilities of the devices. Particularly noteworthy is the trend associated with the use of mobile technologies, the importance of which is constantly growing - 68% of companies in Poland declare the use of these technologies, and 73% in the Czech Republic. Enterprises in Poland are characterized by satisfactory results of indicators regarding Internet access possibilities. On the other hand, access to the Internet in households is characterized by high growth dynamics, from 55.6% in 2010 to 77% in 2015, up to 80% in 2018, which is of great importance for the development of entrepreneurship. However, the distance to the EU-28 average is noticeable in Poland with such e-economy factors as the number of employees using computers at work and the percentage of employees regularly doing part of the work for the company from home. Significant regional differences have a significant impact on these results. The distance between the voivodship with the highest value of this indicator and the voivodship with the lowest value is 29 percentage points. This indicates the development of the information society and the number of jobs in this sector of the economy. The multifunctionality of the website and the benefits of having it mean that the number of companies using this most popular tool in e-economy is systematically growing. In 2018, the ratio of Polish enterprises with their own website was 69%, and Czech companies 74%. With indicators regarding the use of ERP (Enterprise Resource Planning) systems and social media by enterprises, both in Poland and the Czech Republic, it is necessary to make up a few percentage points. to the EU average of 28. However, it is worth noting that, in turn, Czech enterprises are leaders among the Member States of the European Union in terms of receiving orders via computer networks. With this indicator there is a big difference compared to Polish enterprises.

Electronic commerce gives you the opportunity to reach a wide group of consumers from around the world, which allows you to conclude domestic and international transactions (Leinbach and Brunn, 2002). The positive signals of e-economy development include the high growth dynamics of the number of online stores in Poland and the percentage of the population using the Internet, where an additional 68% of users declared that they use the Internet on a daily basis (Ministry of Economy, 2015). This is undoubtedly a huge potential that can be used by e-business. It is understood as a result of a combination of information resources of traditional systems with network capabilities, as a result of improving their contacts with customers, suppliers and employees using computer networks. This is confirmed by stable data on the number of domains. Because in terms of the number of registered domains, Poland (2.6 million) ranks sixth in Europe, ahead of, among others Spain (1.8 million), as shown in table 2. In fifth place - Italy (2.8 million), they have a slightly higher number of registered domains. In contrast, the first three countries have a much larger number of domains than the other

countries. The Netherlands (5.6 million) almost twice as many as the next three places, while the United Kingdom (10.6 million) more than four times more. Germany is the unquestioned leader in terms of the number of domains (15.9 million) and the second country is overtaking by more than 5 million registered domains. The Czech Republic ranks 12th among 28 European Union countries with over one million domains. The number of domains is undoubtedly influenced by the population and size of the country, and nowadays the process of increasing use of the domains of given countries by foreign investors is also intensifying. This will allow you to measure this indicator of e-economic activity. An example of this phenomenon is the Netherlands, which ranks 3rd in this ranking.

Table 2: Number of DNS Domains in the Largest European Union Registers in 2019

Position	Register	Number of domains
1.	.de (Germany)	15 944 050
2.	.uk (Great Kingdom)	10 639 054
3.	.nl (Netherlands)	5 573 396
4.	.fr (France)	2 905 430
5.	.it (Italy)	2 810 520
6.	.pl (Poland)	2 593 490
7.	.es (Spain)	1 776 908
8.	.be (Belgium)	1 512 155
9.	.se (Sweden)	1 363 172
10.	.dk (Danmark)	1 295 533
11.	.at (Austria)	1 173 458
12.	.cz (Czech Republic)	1 091 735

Source: (National Domain Registry, 2019).

2.2 Assessment of E-economy Development in Poland and the Czech Republic Based on the Global NRI Index

The development of the network economy in a given country can be measured with certain measures. The most popular is the NRI (Networked Readiness Index), which defines the country's ability to use information and communication technologies. The World Economic Forum publishes the Global Information Technology Report, in which it compiles a ranking of world countries according to the NRI every year. This index helps to better understand the impact of ICT on the competitiveness of nations. The modified NRI is currently composed of four main components:

1. The ICT environment, which includes two factors: the market of legal regulations and political conditions, and the environment supporting e-economy and innovative opportunities,
2. Readiness to use the e-economy, which contains three factors: development of information infrastructure, financial accessibility and possessed skills,
3. Competence and readiness of the key stakeholder community (three factors: enterprises, consumers and governments) to use information and communication technologies,
4. The actual use of information and communication technologies between the three basic entities of e-economy (e-commerce, e-government, e-learning), which is studied under two factors: real economic and social impact.

According to this ranking (visible in table number 3), Poland in 2019 ranks 37th place (promotion by 5 places compared to the 2016 ranking), and the Czech Republic 30th position

(promotion by 6 places compared to the 2016 ranking) among the countries of the world. This confirms the development and upward trend of both e-economies, and it should be noted that Poland, in particular, is not yet fully exploiting its potential and development opportunities affected by the geopolitical situation in the world.

Table 3: Ranking of Countries According to the NRI Index in 2019

Position	Country	NRI index
1.	Sweden	82.65
2.	Singapore	82.13
3.	Netherlands	81.78
4.	Norway	81.30
5.	Switzerland	81.08
6.	Denmark	81.08
7.	Finland	80.34
8.	United States	80.32
9.	Germany	78.23
10.	United Kingdom	77.73
...
18.	France	73.42
20.	Belgium	72.62
25.	Spain	68.01
...
30.	Czech Republic	65.09
...
37.	Poland	61.46
38.	Hungary	59.95
39.	Latvia	59.31
40.	Bahrain	58.73
41.	China	57.63
...
47.	Romania	55.47
48.	Russia	54.98
49.	Bulgaria	54.77

Source: own study based on: (World Economic Forum, 2019).

Analyzing the ranking of the components of the NRI index for Poland in 2019, the best of the main elements is factor No. 2, which says about readiness to use the e-economy. The highest place in the ranking gives the level of the competition index in the field of Internet services, international long distance transport and mobile telephony services, mainly due to affordability. The greatest potential for improvement lies in the tariff prices for mobile telephony and electricity costs. Whereas in the detailed element concerning skills the lowest place in the ranking is given by the quality of the digital skills education system. With the main factor No. 1, we have the most opportunities for improvement on the market of legal regulations and political conditions, while for element No. 3, competence and readiness to use information and communication technologies by government institutions. Poland received the lowest position in the last main element, i.e. the actual impact of information and communication technologies on the economic and social area. Particularly low position was demonstrated in the translation of ICT application into the availability of new products and services and the use of new management models. On the other hand, in the area of social effects, very low values of translating the use of ICT tools into access to basic health, education and financial services as well as the quality of government services for the society under ICT have been shown.

3. Conclusion

Progress in the development of e-economy is becoming a stimulus for the development of the world economy. In recent years, the electronic economy in Poland and the Czech Republic has recorded continuous development. It is not surprising then that companies show a dynamic increase in the use of e-business in their business activities. Online sales are an opportunity to conquer markets that have so far been out of reach. The electronic economy somehow removes restrictions on access to global markets, which in the traditional economy depend on the company's potential, i.e. broadly understood resources. Thanks to this, every entrepreneur, regardless of the scale of business, thanks to e-economy can offer his products and services on a wide (global) scale. The level and condition of ICT infrastructure in Polish and Czech enterprises can be assessed on the basis of indicators available in statistics. Indicators and rankings for the Czech Republic are more favorable due to the possibility of faster changes within a smaller area. They show that in basic categories (access to a computer and the Internet) this condition in Poland is approaching the EU-28 average, and in the case of the Czech Republic it is above average in most cases. The reserves of these basic indicators are still visible in the sector of small and medium enterprises. However, for Poland, this position in the ranking means incomplete use of the opportunities and resources it possesses. In addition, subsequent indicators relating to the economic aspects of e-economy, legal regulations or the provision of basic services to society show neglect and stagnation in the development of the electronic economy. Therefore, despite much greater opportunities and some positive aspects in the development of e-economy, Poland is currently in the 37th position in the ranking according to the NRI index.

Increased efficiency and competitiveness are not the only, although probably the biggest, advantages of electronic economy. The global economy is in a phase of globalization, affecting especially e-commerce, services and production based on advanced technologies. IT systems that make these changes possible can be classified as a group of strategic systems that are breakthrough in achieving future economic successes. Therefore, work in Poland should be intensified to chase other EU countries in the development of electronic economy. First of all, the national economy should be adapted to the requirements of the global electronic economy by introducing appropriate legal regulations, facilitating and reducing the costs of access to information technology, and preparing society for the challenges of the new labor market. At the same time, it is necessary to create transparent principles of public administration tailored to the open information society by means of ICT tools and increase the scope of services available in e-administration, at least to the level of the EU-28 average, where there are major neglects. The analysis of the presented data should also take care of the development of modern industries and increase their innovativeness, and create conditions for sustainable and even regional development, taking into account modern ICT techniques to improve the competitiveness of the Polish e-economy. The success of digital business may be built on clever technology. But it also depends on the work of a great many people in the physical world. And digitisation must never be an excuse for companies to turn their backs on those workers, and deny them the security and the decent conditions they deserve. So we need to make sure that companies can't escape their obligations to their staff, just by putting a platform between employers and workers. The most important points of the current strategy for the development of e-economy in the EU include: better access to online goods for consumers and businesses, data protection, the right environment for digital networks and services (European Commission, 2020). This strategy is to make sure the EU becomes a role model and a leader for a society empowered by data.

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Achievements of the Council Presidencies in 2019 on EU Migration Policy

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Abstract

Migration became one of the most discussed topics at European Union level in the second decade of the 21st century. Different opinions on its governance and management among EU Member States make it difficult to find common compromises and solutions triggered by the uncontrolled flows of migrants in 2015. One of the tools to speed up mutual negotiations and to reach consensus on the European level is the institute of Presidency of the EU Council. This paper presents the achievements of the recent Presidencies of Romania and Finland on EU migration policy. It is divided into three chapters. The first one is focused on the functioning of the institute of EU Council Presidency. The other two chapters examine the results of the Romanian and Finnish Presidencies. The research is based on analysis of adopted legislative acts and the negotiations of the EU Council during the past 12 months. The paper assesses the main reasons why the Presidencies did not deliver significant progress on the migration and asylum agenda in 2019.

Keywords: *asylum, European Union, migration, presidency, presidency of the EU Council*

JEL Classification: *D72, F22, N44*

1. Introduction

The increase in mass influx of economic migrants and refugees into the Member States of the European Union that broke out in 2015, caught the EU legislatively unprepared. Taking into account only the category of refugees, as part of the total volume of migrants that have been heading to the EU in recent years with the vision to obtain the asylum, it must be noted that the Dublin system, which has undergone several revisions since 1990 to its present form, definitely failed in 2015. The onslaught of refugees from the Near and Middle East and North Africa has pointed out that the current asylum system is uneven, unfair and ultimately too fragile. However, the gradual easing of greatest migratory pressures and tensions in EU Member States in recent years has not brought the expected reform. This European political improvisation has encouraged the growth of several populist movements in Europe, which consistently point to the ineffectiveness of selected EU policies. It should be stressed that the issue of migration policy is not equally essential in the EU Member States, which also means that the national positions on the proposed legislation differ at European level. The EU migration and asylum agenda has secured its position among the top priorities of the Council Presidencies, which define the scope for Member States to launch or accelerate negotiations on selected policies and proposed legislative initiatives. Since 2015, the presidencies have introduced a number of measures to effectively address the migration issues but did not succeed in bringing the necessary and long-awaited reform of the EU asylum system. The Romanian and Finnish Presidencies were no exception.

2. Brief Development of the Institute of EU Council Presidency and its Use in Migration Issues Since 2015

The EU Council has been operating in its current form since 1993. Its predecessors were the original Councils of Ministers of the European Communities (Special Council of Ministers of the ECSC, the Council of the EEC and the Council of Euratom), later in 1967 merged under the Merger Treaty into the Council of the European Communities. (Treaty of Brussels, 1965) Special Council of Ministers of the ECSC already used the institute of Presidency of the Member States, which was based on the alphabetical order of the Inner Six. However, it had only limited decision-making powers intended for the policies outside the competences of the executive branch – the High authority. As far as the other two Communities established by the Treaties of Rome are considered, the level of competences of the Councils has been extended. The functioning of the presidency changed as well, when its term doubled to six months. (TEEC, 1957) The last predecessor of today's Council was the Council of the EEC, founded in 1967. Following the gradual enlargement of the EU, the Council Presidency was extended to new Member States. Over the decades, it has become an important tool for the states to acquire a supranational European role in the development of Union policies in 6-month term. However, the presidency ran into its greatest limit - discontinuity of the Council's work, as the individual states priority areas of the policy making often differed significantly. Each six-month period has thus become a tool for achieving the subjective priorities of one state, many times apart from the agendas of the previous presidencies. (Raik, 2015)

Table 1: The Original Order of the Trio Presidencies Set by the Council

Period	Presidency Trio Countries	Period	Presidency Trio Countries
01/2007 – 06/2008	Germany, Portugal, Slovenia	07/2014 – 12/2015	Italy, Latvia, Luxembourg
07/2008 – 12/2009	France, Czechia, Sweden	01/2016 – 06/2017	Netherlands, Slovakia, Malta
01/2010 – 06/2011	Spain, Belgium, Hungary	07/2017 – 12/2018	UK, Estonia, Bulgaria
07/2011 – 12/2012	Poland, Denmark, Cyprus	01/2019 – 06/2020	Austria, Romania, Finland
01/2013 – 06/2014	Ireland, Lithuania, Greece		

Source: Authors own work based on Office Journal of the European Union, 2009.

The need to create a mechanism to ensure the continuity of the programs and priorities of the individual presidencies resulted in the creation of a so-called Council Presidency Trio. The Lisbon Treaty introduced a system of rotation of the trio countries, which preside the Council over a period of 18 months. The main objective of the implementation of such system is, according to the Treaty, to improve the Council's medium-term policy planning and actions and to spread the administrative burden of the Presidency for one Member State. (Buonanno and Nugent, 2013) Trios are composed in way to maintain diversity and geographical balance within the Union. As a rule, there must be one large and one small Member State geographical location of which should be different and at least one "newcomer" that joined the EU in 2004 or later. (TFEU, 2007) Such combination of states is intended to ensure a balanced presidency. All of the EU Member States already chaired the Council, the last being Croatia, which holds the Presidency in the first half of 2020. The first established order of the trios approved by the Council can be seen in Table 1. The United Kingdom of Great Britain and Northern Ireland

was later removed from the order, shifting the following presidencies six months earlier. After the latest EU enlargement, the Croatian Presidency was scheduled for the first half of 2020.

In the second half of 2015, the fifth Presidency Trio was concluded by Luxembourg. At this time, the culminating European migration crisis and the expectations of the statement of the British referendum, which became the public promise of former British PM David Cameron, became the main topics of European discussions. (Kučerová, 2018) While examining the programs of the presidencies since 2016, the priorities of the programs were influenced by the aforementioned events. In particular, migration management and EU asylum system reform have become important pillars of past presidencies in lesser or greater extent. Since 2015, the European Commission has proposed a number of legislative proposals for the Council's negotiations on migration and asylum in the EU. In general, several of them were approved and are already in force improving the management of legal migration and the control of illegal migration. Successful negotiations on granting financial assistance to migrant countries of origin and the first line of EU countries most affected by migration management, strengthening the mandates of the authorities responsible for migration management, improving the fight against smugglers etc., have significantly contributed to this. (Council, 2020a)

However, finding common achievements in asylum policy reform is still almost impossible. The seven legislative proposals submitted by the European Commission to the EU Council in two legislative packages in May and July 2016 have not been approved yet. (Council, 2020b) One of most controversial parts of the reform that has hampered the entire package of proposals since 2016 is to set up a new EU resettlement framework to meet the need for effective and immediate resettlement even in such situations that arose in 2015 and 2016. (Brocková, 2019) The resettlement system has often met great criticism in the Member States and has been used as the political capital of populist movements in Europe. Since 2016, it has been used to resettle the refugees ad hoc only by some of the Member States. Presidencies of the Council also failed to reach a consensus on asylum policy reform which led to the end of the former Commission efforts to prepare a generally acceptable reform. In late 2018, Dimitris Avramopoulos, the Commissioner for Migration, Home Affairs and Citizenship, started to urge Member States to close five uncontroversial points of reform, indirectly postponing the two most difficult points – EU resettlement framework and Dublin Regulation itself, to the newly established Commission after the European Parliament elections in May 2019. (Euractiv, 2018)

However, Avramopoulos' speech did not cause any surprises and asylum reform package has not been negotiated since mid-2018. Thus, the Juncker Commission did not fulfil one of its 5-year priorities, to establish new pillars of the migration and asylum policy. On the other hand, it is important to note the order in which the EU Member States presided the Council since 2015. In most of the cases, the Presidencies made migration and asylum „compulsory priorities“, but still focused the initiative and ability to make progress on those policy areas where consensus was more likely to be achieved. None of the past three Presidency Trios can be described as a strong alliance of countries fighting for asylum policy reform. Moreover, there is not a single Presidency Trio composed of countries most pushing for the reform. All of the first-line countries hit by the asylum seekers such as Spain, Italy, Greece, Cyprus and Malta are members of various Trios. (Brocková, 2019)

Theoretical approaches assessing the Presidency Trio and the Council Presidency as such are the subject of many discussions and works by many researchers. According to Young, the 6-month leadership of the country during its presidency may have a structural or entrepreneurial character. While structural presidency is based on the material resources of large Member States to exercise structural leadership, it predestines the leverage of presidency-led negotiations to achieve states interests at international level. However, such leverage was

mainly used in the period of the original six Member States, when Germany and France played an important role in share of votes. The entrepreneurial leadership, on the other hand, is being exercised mostly by small states, position of which is not so dominant in collective negotiations. Such presidencies, through new and innovative discussions and proposals can often achieve a relatively general consensus that could otherwise be missed. (Young, 1991) There is a number of views on what constitutes the limits of the presidency. In general, the composition of 18-month presidency itself plays an important role in achieving tangible results in the legislative process. At the same time, the negotiations are highly dependent on the work of the European Commission responsible for the legislative proposals. Nevertheless, it is crucial for the Member States to have leadership resources at its disposal, particularly a large national administration of well-trained officers. (Mazzucelli, 2007) Presidency is rarely assessed at the end on how well it managed the Union. It is more often assessed on leading the Member States, which is easily pointed out in results of those negotiations and initiatives that are under the scrutiny of the Europeans. The research on Council Presidency issues and possibilities of the agenda-shaping and achieving the program priorities is extended by many theorists such Jonas Tallberg, Michael Siebert, Paul Marnette, Kalypso Nicolaïdis and many others.

3. The Romanian Presidency and the Migration Agenda

After the former European Commission in 2018 surrendered in the struggle to finish the asylum reform, the pressure on the incoming Presidencies decreased. Several already opened legislative proposals concerning migration and whole asylum reform waited for Romanian Presidency to be negotiated again. In general, any ice breaking on these topics would be considered a success of the Presidency. (European Parliament Research Service, 2018)

The pressure of the EU as a whole was replaced by the United Nations Refugee Agency, calling on Romania to encourage the Member States to achieve consensus on migration issues. However, the period itself, during which the presidency took place (May's European Parliament Elections) predetermined the Romanian Presidency to fail in adoption of the regulations that rise the populist strain in Europe. Moreover, migration and asylum policy have not even been declared as priorities of the presidency program that Romania presented shortly before the beginning of the 6-month chairing of the Council. All in all, Romania pushed forward 90 pieces of legislation till May's Euro-elections, gaining much praise. On the other hand, neither migration or asylum surprises happened. (Euractiv, 2019a) When examining the key developments in the work of Council during the presidency, Coreper endorsed five regulations concerning migration issues. Moreover, Romania managed to approve two of them till the end of the presidency by the Council itself.

The first adopted initiative was concerning the amendments to the Visa code regulation which will improve the conditions for legitimate travellers. It measures the extension of the period during which visa applications can be applied, the digitization of visa applications and the simplification of the visa procedure for repeated applications. However, it is important to realize that such uncontroversial regulation could have been probably handled by any of the presidencies. (Council, 2019a) The other regulation, negotiation of which was a bit longer is supposed to strengthen the powers of immigration liaison officers of the EU in third countries. Almost 500 current officers operating in more than 100 countries under the new guidelines will be able to address migrant smuggling more effectively, facilitate returns of illegally staying third countries nationals and facilitate the exchange of information between the EU and third countries more effectively. (Council, 2019b)

The fact, that the aforementioned regulations were managed by Coreper and Council itself during the 6-month presidency underlines that Romania chose an easier migration policy path, leaving the more controversial part of the migration agenda for the upcoming presidencies. While answering the question of why Romania did not push for accelerated reform of the common asylum system, it should be borne in mind that Romania is one of the countries with significant reservations on the former Commission's proposal. The unwillingness of the presidency to come back to basics of the asylum reform and zero-initiation of negotiations on asylum topics can be understood as a Romania's attempt to postpone the negotiations to 2020, hoping the Commission will present a less controversial version of the reform. (Euractiv, 2019b) Thus, the Romanian distant used the presidency to bridge the first half of 2019 waiting for the new European Commission to be established. The reluctance of the presidency to discuss the asylum reform all over again was being advocated by Carmen Dan, Romanian Minister of Internal Affairs, by saying that Europe does not need antagonistic solutions to stimulate populism, extremism and undermine political cohesion at the time of the Euro-elections. (Euractiv, 2019c)

4. The Finnish Presidency and the Migration Agenda

The past Finnish Presidency was the country's third presidency of the Council. As in the case of Romania, Finland did not include a common migration and asylum policy in its 6-month priorities. However, the presidency program assesses that the reform of the current asylum system, as offered by the European Commission, is unachievable, evidenced by minimum progress in the negotiations in recent years. Therefore, Finnish ambitions at the beginning of the presidency in July 2019 were clear: to remove the interdependence between the individual parts of the reform and to negotiate all of them separately. (Finland's Presidency Programme, 2019) In this way, political improvisation leading to ad hoc measures being taken for specific situations in Europe and beyond would be reduced.

The only notable but important outcome of the Presidency in migration policy was the adoption of the revised regulation on the European Border and Coast Guard. Thus, after more than a year of negotiations between the Council and Parliament preparatory bodies, the regulation was adopted in November 2020. The mandate of the European Border and Coast Guard Agency, which controls migration across the EU's external borders since 2004 was significantly widespread. The new regulation also merged the European Border Surveillance System (EUROSUR) under the auspices of Frontex. The extension of Frontex's mandate and the reinforcement of staff and technical support can be seen as a precious result, as the extension of Frontex received criticism from several states in the past. (Council, 2019c)

Although the Finnish Presidency did not conclude many of the ongoing proposals on migration management and asylum reform, it has allowed an important bridge between the former and newly established European Commission. Almost immediately after the new Commission was set up, statements arose, that it would come up with New pact on migration and asylum. However, in order to set the limits and constraints of the future legislation proposals, the Finnish Presidency held two important Council meetings to discuss the Member States' expectations on future migration policy. During the Home Affairs Council on December 2, 2019 ministers also reviewed the achievements of the last 5-year term. At the same time, the European Commission confirmed the preparation of a New pact on migration and asylum, which should be presented in March 2020. (EUobserver, 2020)

Thus, the Finnish negotiations on migration and asylum, in which the former Commission firmly believed, turned into a debate, albeit a very important one. Its implementation was also appreciated by the new Commissioner in charge of migration – Ylva Johansson, according to

whom any further negotiations on the former legislative proposals are unnecessary. At the same time, she supported the initial intention of the Finnish Presidency which was to minimize the mutual conditionality of the individual parts of the asylum system reform. A major ad hoc event of the presidency was the approval of a new scheme to distribute migrants saved from the Mediterranean in a deal aimed at relieving the pressure on southern EU Member States. However, only 5 Member States (Finland, Germany, France, Italy, Malta) supported another temporary scheme, which sent another clear signal to the European Commission drafting new legislation on migration and asylum in Europe. (Euractiv, 2019d)

5. Conclusion

Given the amount of legislation adopted under the Romanian and Finnish Council Presidencies, these presidencies cannot be described as successful in terms of migration policy. The main limits of the last year's presidencies were mainly the institutional changes after the European Parliament elections in May 2019 and the resignation of the European Commission in the preparation of new legislative proposals in some migration and asylum policy areas in mid-2018. The role of the Presidencies to bring Europe to repetitive controversial negotiations has been replaced by the calming of the situation before the European Parliament elections and the subsequent formation of the Commission, that has contributed to stabilizing populism alienating any coherent model of dealing with migratory pressures at European level. As several Commission proposals on migration and asylum management issues had been rejected by the Council since 2015, the last year's presidencies did not actively seek to reopen them. The past presidencies have therefore postponed these agendas to 2020, when the European Commission is likely to present New pact on migration and asylum. All in all, the European Commission which strongly believed in endorsing at least some of the legislative proposals that have stagnated in recent years, as farewell to its 5-year term, did not achieve one of its main priorities. In contrast to the senseless reopening of rejected proposals, the Finnish Presidency provided the European Union significant scope for setting clear priorities and constraints for the drafting of new legislation that can alleviate the controversy of given policies and thus end the European political improvisation that began as a result of the migration crisis in 2015. On the other hand, it is likely that the introduction of the new pact will trigger another wave of populism in Europe which currently subsided. The following Council Presidencies will therefore have a unique opportunity to open and successfully conclude negotiations on new legislative proposals on migration and asylum related issues. With German and French Presidencies ahead in years to come, it is the right time to focus on such issues. In the case that even the New pact on migration and asylum does not meet the consensus of majority of the Member States, the political improvisation can continue until the following European Parliament elections, if not even longer.

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Contemporary Development of the CSDP of the European Union and its Influence on the Deployment of the of the Czech Armed Forces Units Abroad

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Abstract

The creation of a Common Foreign and Security Policy (CFSP) in the 1990s and later a Common Security and Defence Policy (CSDP) was intended to strengthen the European Union in areas where it had played a rather minor role until then. Gradually, a number of institutions were established to help strengthen the European Union's position in the area of global security. Relatively new body, the European External Action Service, set up under the Lisbon Treaty, has allowed a much better and more effective coordination of key processes in the field of security and defence policy. In this way, the European Union can act within its missions and operations in a number of regions of the present world, especially in Africa.

The aim of this article is, by the use of mainly qualitative analysis, to examine and characterize key decisions, events and actions within the framework of CSDP, which influence the strategy of deployment of the Czech Armed Forces units in operations abroad.

Keywords: *Africa, Common Security and Defence Policy, Czech Armed Forces, European External Action Service, European Union, EU missions and operations, Sahel.*

JEL Classification: *F15, F51, F52, F53*

1. Introduction

More than a quarter century after the major political changes in the world in connection with the end of the Cold War, European Union gets back to the days of security uncertainty. The issue of capability to utilize and increase the military capabilities of EU Member States, which should be one of the key elements for the long-term safeguarding of European security, comes to the fore. Although the rapid decline in the world's bipolar division has significantly reduced the probability of global military conflict, the recent security situation cannot be considered free of security threats. All this is done against the background of the growth of "non-Western actors" (China, Russia, but also Gulf countries, India or Brazil), the accumulation of economic and political problems, and the escalation of tensions and conflicts around the south and east of the European Union borders (Kabus, Mynarzová and Jendrzejas, 2018).

Although the trend in defense spending, which the EU member states and especially NATO has begun to increase gradually, has changed in connection with the development of events in Ukraine (2014) and their dynamism at that time, the question is whether they managed to catch up with the deficit from previous years. At the same time, the willingness of the public and politicians to increase defense spending significantly in connection with a number of problems, e.g. as the economic crisis in the context of the Corona virus pandemic, may be a major problem (along with the United Kingdom, however, only Bulgaria, Greece, Romania, Poland

and the Baltic countries met their commitments and spent more than 2% of their GDP for defence in 2019). Whether and to what extent negative security developments in the so-called *rainbow (arc) instability* (Sahel, North Africa, Middle East) with a significant overlap into European Union can contribute to changing such attitudes is open. (The Military Balance, 2019; Balabán, Pernica a kol, 2015).

The CSDP is a very specific and exceptional area due to the national sovereignty of the EU Member States, which remains fully within the competences of national governments. The CFSP is set out in the Treaty of Lisbon (Treaty on European Union - EU Treaty, Article 21) and covers a wide range of EU security issues, which are also listed in a number of other documents. CFSP is an integral part of the Common Security and Defence policy, which provides capacity for international operations by civilian and military resources of the EU (Kaňa, Mynarzová, 2014).

As Kaňa, Dvoroková (2018) or Koziej (2018) point out, progress in the area of CSDP has been rising in last years. The activities of European Commission, the European Council, and especially the European External Action Service (e.g. EU Global Strategy, PESCO, etc., see below) show a common interest in improving cooperation in this area and to continue in the coming years in the gradually building of a common European defence.

As stated by the Ministry of Defence of the Czech Republic, (2019) the Czech Republic's defence policy is designed with respect to both NATO and EU memberships, and benefits from the provision of home defence and security while, in turn, committing the Czech Republic to adequately contribute to the development of the collective defence of other member countries. Of course, the strategy of deploying units of the Czech Armed Forces (CAF) in foreign operations respects the Czech government's obligations to both organizations. After joining the European Union, the Czech Armed Forces actively and regularly participate in a number of European Union missions and operations within the CSDP.

This article, using a qualitative analysis, will point out the most recent changes in CSDP, activities in the field of foreign missions and operations of the European Union with a focus on Africa and explain the changes in the present deployment of Czech Armed Forces in operations abroad.

2. The CSDP – Changes, Contemporary Threats, Foreign Missions and Operations

Common Security and Defence policy came quite sharply at the forefront of political interest in the summer of 2016, when European politicians sought an answer to the surprising results of the British referendum on leaving the EU in the context of the deteriorating security situation in the world. On 28 June 2016, the new *EU Global Strategy of 2016* was presented, identifying among others (see Kaňa, Dvoroková, 2018) also three important priorities for the future development of the CSDP:

1. Intensification of defense cooperation between states, which resulted in the establishment of *Permanent Structured Cooperation* (PESCO, see below) at the end of 2017. Cooperation should aimed at reducing costs through joint purchases, sharing military capabilities and preparing the European forces for deployment,
2. Creation of a *European Defense Action Plan* to support research and development in the field of security,
3. Deepening EU-NATO cooperation based on the principles of the Warsaw Declaration of 9 July 2016. Deepening should take place especially in areas where EU engagement

makes sense: defence against hybrid threats, cyber security, defense research and defense capabilities, or joint training.

The *Permanent Structured Cooperation* project, known as *PESCO* (based on Article 42 and 46 TEU, The Lisbon Treaty [online], 2008), was launched on 11 December 2017. Its main objective is to strengthen European Union cooperation on security issues affecting the sovereignty of nation states. The project was decided to involve 25 EU Member States (without Denmark and Malta). Sharing resources, coordinated planning or joint development of armaments and military equipment should be the main benefits of participating in PESCO. This should not only bring significant financial savings, but also strengthen the interoperability of the armies of European countries. In March 2018, the first 17 planned projects were approved. Work negotiations will now begin on their concrete form. The Dutch Military Mobility Program, also known as the *Military Schengen*, aroused the greatest interest from member countries. It aims both to unify and standardize procedures related to cross-border military transport and to remove physical barriers in the form of insufficient infrastructure. The project is demanding in the area of logistics, mutual management and coordination of member state governments and local units (Euroskop [online], 2018; Kabus, 2017).

The Czech Republic in *PESCO* actively participates in three projects and in three others it acts as an observer. It was involved in the above-mentioned *Military Mobility* and in two projects led by Germany: the *Single Medical Command* to create shared medical platforms and medical training for EU missions and operations and the *EU Center of Excellence for Operational and Accessibility Training Missions*. In the second phase of the projects, decided in November 2018, the Czech Republic assumed the role of Leading Country of the project *Capability and Interoperability of Electronic Warfare* and as a participant in the other four programs (*Integrated Unmanned Ground Systems*, *Remote Controlled Unmanned Aerial Vehicles*, *Defense System against Unmanned Aerial Vehicles* and *Sharing Military Bases*), *European Defense Action Plan*. The Action Plan aims to improve the cost-effectiveness of military spending, pooling common resources for greater security and making Europe's military industry more competitive. The key points of the plan are:

- a. Establishment of the *European Defense Fund* (see below), which should focus on funding both research and common capabilities,
- b. Investment support for contractors in the defence industry,
- c. Strengthening the single market in defence - by improving competition law or cross-border business (Euroskop [online], 2018).

Additional important step in strengthening the CSDP and closer cooperation within the EU member states was the establishment of the *European Defense Fund* (EDF) in June 2017, the task of which is to support integration processes within the framework of expenditures used mainly for the purchase of military equipment. EDF has two parts - "Research", fully subsidized by the EU budget, with EUR 90 million by the end of 2019, with EUR 25 million allocated for 2017, then EUR 500 million for the year after 2020. The second part is "Development and Acquisitions", for Member States to work together on the joint development and acquisition of defense equipment and technologies through co-financing from the EU budget and practical support from the Commission, with a total of €500 million for 2019 and 2020, then €1 billion per year after 2020. financing with an expected multiplier effect 5. After 2020 could therefore generate 5 billion EUR a year, (EEAS [online], 2019).

Foreign operations and missions of the European Union carried out under the CSDP are considered the most important tool to ensure not only its own but also global security. This makes it the top of the existing efforts of the Union's CSDP. Not all Member States are involved equally in the foreign operations, but it always regards the participation of the

countries under the supports of the Union. The European Union recognizes three types of these operations - *military, police and missions in support of the rule of law (civilian)*. These types differ not only based on personnel involved (troops, police officers, civil servants), but in particular by its features (TEU, Article 43). Since 2003, when the first EU foreign mission (EUPM in Bosnia) was sent - by March 2020 a total of 36 missions were carried out, 19 of which have already been completed. Five of them were purely military, 11 were civilian/police and one operation (AMIS II) had a civilian-military character. As of March 2020, the Union leads a total of 17 missions (see Table 1), 6 of which can be referred as military and 11 as civilian/police. The key military missions can include those naval in Somalia (Horn of Africa) and the Mediterranean (newest EUNAVFOR MED Irini).

Close to 5,000 European military and civilian experts are currently engaged on the ground in Europe's neighborhood: the Western Balkans and Eastern Europe, the Middle East and especially Africa. With mandates tailored to the needs of the situation on the ground, their aim is try to stabilize EU partner countries in the surroundings and thus provide security at home (EEAS [online], 2020; Kaňa, Mynarzová, 2016).

Table 1: Ongoing EU Missions and Operations

Missions	Destination	Starting year
EU NAVFOR Somalia	Somalia	2008
EUTM Somalia	Somalia	2010
EUCAP SAHEL Niger	Niger	2012
EUBAM Libya	Libya	2013
EUTM Mali	Mali	2013
EUCAP SAHEL Mali	Mali	2014
EUTM RCA	Central African Republic	2016
EUCAP Somalia	Somalia	2019
EUNAVFOR MED IRINI	Libya, Mediterranean	2020
ALTHEA/BiH	Bosnia and Herzegovina	2004
EUBAM Moldova and Ukraine (not fully under CSDP)	Moldova and Ukraine	2005
EUBAM Rafah	Rafah/Gaza Strip	2005
EUPOL COPPS/PT	West Bank	2006
EULEX Kosovo	Kosovo	2008
EUMM Georgia	Georgia	2008
EUAM Ukraine	Ukraine	2014
EUAM Iraq	Iraq	2017

Source: author's elaboration based on EEAS (2020)

On the other hand, as J. Bartosiak states in Armádní noviny (2019), stability (military, social, economic, etc.) is the foundation of any civilization development and security, and that is precisely not what EU has, because it is influenced by (possible sources of instability) from four directions, i.e. Russia, USA (a strict partner rather than a source of instability), the middle East and North Africa (with Sahel countries – Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Cameroon, Central African Republic/RCA, Chad, Sudan, Eritrea).

In the case of the Middle East, Europe has already lost its buffer zone and thus the possibility to control the influences coming from this area. Now everything is under the control of Turkey,

which is free to regulate (or not to regulate) possible sources of instability (mass migration, drugs, terrorism, raw materials) flowing from the Middle East to Europe. Europe has already lost its defensive perimeter towards the Middle East, so Turkish President Erdogan can afford to threaten Europe with mass migration.

Europe is also no longer controlling North Africa, which is to be geopolitically “part” of Europe. The influence of the former colonial powers of Great Britain and especially France in Africa is declining. Now the Mediterranean Sea is an unprotected link between Europe and Africa, through which people, drugs or weapons can be freely directed to Europe. Europe is simply too weak and indecisive to exercise effectively its will in this area (*rainbow instability*).

As shown in Table 1, the first nine missions (of ongoing 17) are carried out in Africa. Taking into account already completed missions, out of a total of 19 operations, 11 have been carried out in African countries (mainly the Sahel). All this highlights the importance of Africa for the security of the European Union (and also the Czech Republic). Although 9 CSDP missions are currently underway in Africa, France itself, as a former colonial superpower in the region, is also trying to improve the local security situation. *Operation Barkhane* is an ongoing counterinsurgency operation in the African Sahel region, which was launched on 1 August 2014. The core consists of 4,500 soldiers from France who have their permanent seat in the capital of Chad, N'Djamena. Soldiers are in charge of counterterrorism operations in the so-called “G5 Sahel,” (Burkina Faso, Chad, Mali, Mauritania and Niger). The French army initially operated in Mali in early 2013 as part of *Operation Serval*, which literally “cleared” the north of the country from Islamist groups. *Operation Barkhane* aims to build on this success and extend the operation to a vast area of the Sahel while maintaining control of the territory and preventing the region from becoming a safe place for Islamist terrorist groups planning attacks in Europe. French soldiers, however, in the region also have a number of incidents and losses, since 2014 a total of 34 soldiers, and dozens were seriously injured (CZ Defence [online], 2020).

2.1 Czech Army Forces and Their Deployment in Foreign Operations

The Czech Republic safeguards its sovereignty and territorial integrity under the provision of collective defence as defined in Article 5 of the North Atlantic Treaty. Within the EU, defence and security cooperation is being further developed and deepened in response to the EU Global Strategy 2016 and to the activation of the Permanent Structured Cooperation (PESCO) in 2017 (see above). Membership in international organizations, however, does not relieve the Czech Republic of its primary responsibility for its own defence. But as mentioned above, a number of threats to Europe (the European Union) are also a threat to the Czech Republic, therefore it is of great interest to the Czech Republic to strengthen its defence capacity and readiness, and to take its share of the responsibility in supporting those allies and partners who bear the greater share of the burden.

Unfortunately years of underfunding has left the Czech Armed Forces limited in carrying out their missions in terms of human resources and equipment. The accumulated shortfalls will hamper the development of the capabilities of the Czech Armed Forces for many years to come. Acknowledging the worsening security situation, the Government of the Czech Republic has taken measures to redress the situation and has started increasing defence spending. In line with its NATO commitments, the Czech government will ensure that the defence budget will progressively increase to the level 1.4% GDP by 2020. In line with the conclusions of the 2014 NATO Summit in Wales, the Czech Republic will attempt, over the next ten years, to reach the 2% GDP benchmark for defence spending. (Ministry of Defence of the Czech Republic, 2019).

Unfortunately, at present, the Czech Republic's defense spending is (in terms of GDP) one of the lowest in NATO, as shown in Table 2, the Czech Republic's ranking is the fifth from the end.

Table 2: Defence expenditures as a share of GDP (%)

Country	2015	2016	2017	2018	2019e
Luxembourg	0,44	0,4	0,52	0,51	0,56
Spain	0,92	0,81	0,90	0,92	0,92
Belgium	0,92	0,91	0,9	0,91	0,93
Slovenia	0,93	1,01	0,98	1,01	1,04
Czech Rep.	1,03	0,96	1,04	1,13	1,19

Source: author's elaboration based on The Military Balance (2019)

However, despite all the problems, the Czech Armed Forces are regularly involved in foreign operations under the auspices of NATO, the UN, and, of course, the European Union. Members of the Czech Armed Forces have completed dozens of foreign missions, including in Macedonia, Lithuania and Iceland. Currently serving, for example, in Mali, Somalia or Sinai. However, they have earned most credit in the former Yugoslavia, Iraq and Afghanistan, where they are still engaged (20. Task Force CAF in Mission Resolute Support, in 2018 a total of about 447 soldiers) (MOCR [online], 2020).

Although the Czech Armed Forces have been deployed mainly in NATO and UN-led operations, since the Czech Republic joined the European Union, their members have regularly participated in CSDP foreign missions. Most of them were officers who, in a relatively small number, participated in the work of command staffs both at the scene of operations and in the command structures in Brussels. As an example can be mentioned the following missions: Concordia (2003), EUFOR Tchad (2007-2009), NAVFOR ATALANTA (2008-2020), EUNAVFOR MED Sophia (2015-2020). However, as part of Operation Althea (2004-present), more than 400 members of the CAF were deployed (during 2004-2008), including the elite 601. Special Forces Group (601. skss).

Given that the United States signed an agreement with the Afghan Taliban at the end of February 2020, which, if it is respected, foresees a gradual withdrawal of coalition troops from that country, will also change the priorities in deploying CAF troops abroad. So the key area where the Czech Armed Forces troops will be deployed in next future will be Africa, especially Mali.

One of the main military operations is the European Union Training Mission in Mali (EUTM), conducted within CSDP. 21 Member States are participating in the operation. Czech troops have been active in EUTM Mali since 2013. With 120 soldiers (2019), the Czech Armed Forces are the third largest contingent. The main task of the Task Force CAF, was to protect the EUTM Mali headquarters in Bamako, the Koulikoro training center and the training / mentoring teams, and training of the Malian armed forces. In addition, Czech Republic will take the lead of the EUTM Mali, in June 2020 (CZ Defence [online], 2020).

On 26 January 2020, the Czech government decided to send 60 soldiers of Czech Armed Forces, apparently from the 601. Special Forces Group, to Mali, Africa. The troops will join the European Combat Command *Takuba* as part of *Operation Barkhane* (see above). Czech soldiers will operate mainly in the area of the common border of Mali, Niger and Burkina Faso, but it is also planned for short-term ad hoc raids to neighboring Niger. *Takuba's* mission is to train, mentor, and combat assistance to Malian troops. Separate combat operations are not

excluded. Just *Takuba* units form a kind of bridge between the peacekeeping operation EUTM Mali and the French combat operation *Barkhane* (Armádní noviny [online], 2020).

3. Conclusion

The present world, and especially the regions that surround the European Union, cannot be certainly labelled as a secure. As already mentioned in this article, the *rainbow (arch) of instability* in particular affects present European security and the situation, especially in African countries, should be closely monitored by the EU security institutions.

In general, the European Union (as many security experts and politicians have long been talking about) is faced with the challenge of a greater division of roles in ensuring security in its neighborhood with the United States, which is no longer willing to act as an unambiguous security supervisor.

In Africa (and the Sahel in particular), the European Union seems to want to maintain its position as a kind of security guarantor, and as has been pointed out, most foreign missions and CSDP operations (both completed and ongoing) focus on this region.

The Czech Armed Forces are deployed outside the territory of the Czech Republic, to support the efforts of the international community, in accordance with the principles of international law, in a broad range of operations led by NATO, UN or the EU and other international organizations, or on a bilateral basis. The Czech soldiers can take part in collective defence operations, peace enforcement, peace support and peacekeeping operations, as well as in post conflict stabilisation and reconstruction. This year is likely to be very significant in that the number of Czech Armed Forces deployed in Afghanistan will gradually decrease, while the Czech presence in Africa will increase, especially in the Sahel.

As Minister of Defence Lubomír Metnar pointed out (Armádní noviny [online], 2020), “*By sending forces and means to Mali, Niger and Chad, the Czech Republic confirms the position of a country that intends to fight all forms of terrorism, thus fulfilling one of the points of the Government's Policy Statement*”. The deployment of Czech soldiers underlines the greater diplomatic, economic and military activity of the Czech Republic in Africa (Sahel) in the framework of EU operations. On the other hand, it is appropriate to recall that the Czech Republic sends troops to Africa on the French request and under French command (*Operation Barkhane*), not under the mandate of an international organization such as the NATO or EU. The fact that such activities of the Czech Armed Forces are taking place and can also be expected in the future and the development in the field of CSDP continues at a relatively fast pace (despite the present pandemic situation), there is scope for further research that can bring interesting results.

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Instability Problem of Central Exchange Rate into Euro

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Abstract

The purpose of this study is to identify the economic effects of an incorrect level of the national currency exchange rate when entering the European monetary union. The analysis carried out includes the potential impact of a suboptimal currency exchange rate on the economy of a country entering the eurozone in the context of the conversion rate. As part of the considerations, the experience of the current euro area countries was analysed, especially regarding Greece, Slovakia and the Baltic States. Based on statistical exchange rate data and analysis of the experience of the current euro area countries, it was found that adequate response to too far-reaching deviations of the central exchange rate from the equilibrium exchange rate was important. However, the use of currency interventions to defend the central exchange rate fixed at the entrance to ERM II may lead to negative economic consequences. In particular it may jeopardize the maintenance of compliance with the convergence criteria.

Keywords: central exchange rate, conversion rate, ERM II, European monetary union, eurozone.

JEL Classification: F33, F36, G28.

1. Introduction

The nominal convergence criteria set out in the Treaty on the Functioning of the European Union with the entry into force of the Treaty of Lisbon, contain economic indicators that should be met by an aspiring state for full participation in economic and monetary union, the fulfilment of which was intended to guarantee a relative convergence of results [Czekaj and Owsiak, 2010, p. 28]. The main objective of the application of the convergence criteria is to verify that the rated country is able to operate in the euro area without disruption, despite the lack of independent monetary policy and the constancy of the nominal exchange rate within the single currency area.

The verification of the sustainability of the meeting of nominal convergence criteria shall be carried out by participating in The Exchange Rate Mechanism II (ERM II), which is the successor to the first Exchange Rate Mechanism operating under the European Monetary System. The ERM mechanism is based on the binding and stiffening of member states' exchange rates. The range of fluctuations varied over time. Prior to the introduction of euro currency, exchange rates were related to the ECU. The ECU was so-called the "basket" currency, the exchange rate of which was determined by the weighted average basket of currencies of each Member State. The maximum exchange rate range relative to the central exchange rate was set for all currencies and the first period of fluctuation could not exceed $\pm 2.25\%$. Only Italy benefited from the possibility of extending the fluctuations to $\pm 6\%$. Exchange rate fluctuations beyond the designated framework were to be offset by state intervention.

The current ERM II is a system with a fixed central rate and a limited range of permissible deviations from it in the range of $\pm 15\%$, to which the country's central bank undertakes to defend itself. The stability of the currency exchange rate of the aspiring country to monetary union guarantees that the exchange rate cannot be manipulated and is consequently intended to ensure the stability of the European currency after the accession of the new country. Staying in ERM II is one of the criteria for the state's admissibility to start the process of replacing the national currency by the euro currency. For each currency participating in the mechanism, a central exchange rate vis-à-vis the euro shall be set on the basis of an agreement between the monetary authorities of the country participating in ERM II and the ministers of euro area countries and the European Central Bank. The choice of the central exchange rate is crucial for the stability of the candidate country's economy for monetary union [Konarski, 2012, p. 143]. Therefore, the purpose of this study is to identify the economic effects of an incorrect level of the national currency exchange rate when entering the European monetary union. The analysis carried out includes the potential impact of a suboptimal currency exchange rate on the economy of a country entering the eurozone in the context of the conversion rate.

This goal is achieved by analysing three types of paths based on the experience of the countries joining the ERM II, which indicate the following scenarios of joining the mechanism: fixing the central rate above the market rate (Greece road) or below the market rate (Slovakia road) and fixing the central rate at market rate (Baltic States). The key for selection of countries to present experiences of adjusting the central rate was firstly the need to make adjustments, and secondly, the use of different strategies for adjusting the central rate.

In an age of globalization, including financial markets, resulting in very fast-moving capital, the difficulty is stabilizing the exchange rate. Capital flows, the more strongly they affect the level of the exchange rate, the smaller and less liquid the country's foreign exchange market is. A basic effect of the stabilisation of the relation between the national means of payment and other currencies is a higher level of certainty in international flows [Wawrzyniec, 2011, p. 131]. The activities of arbitration funds have particular importance here when they change the structure of their investment portfolios. A relative reduction in the profitability of financial assets in developed markets may result in a significant amount of capital being placed by these funds as per small markets [Persson and Tabellini, 2004, p. 26]. The presence of the currency in ERM II creates a risk of distortion spurring and is not conducive to its stabilisation, especially in fast-growing economies with a relatively shallow financial market. At the same time, it should be borne in mind that even a significant weakening of the market rate vis-à-vis parity does not mean a negative assessment of exchange rate stability in advance. Participation in ERM II would not be such a risky undertaking if it did not entail the need to meet all other convergence criteria at the same time. In terms of the possibility of stabilising exchange rate fluctuations and meeting the remaining convergence criteria, the proper composition of macroeconomic policy on both its fiscal and monetary fronts is crucial.

2. Currency Interventions in ERM II

The establishment of the central rate is a process of multilateral arrangements with the participation of the Council of Ministers of the euro area countries, the European Commission, the European Central Bank, the Economic and Financial Committee, as well as finance ministers and the head of the central bank of the country concerned. The central rate should be close to the market equilibrium exchange rate of the currency to the euro however it may be adjusted. The economic policy of the countries participating in the ERM II system should be consistent with the adopted central rate. Interventions at the ends of the band are in principle automatic and unlimited, unless it conflicts with the overriding objective of price stability in the Member State or euro area concerned. The central rate should be set at such a level that it

is possible to meet the exchange rate convergence criterion during the assumed period of stay in the mechanism. ERM II is a multistage system of fixed exchange rates with a fixed central rate and a standard range of fluctuations of $\pm 15\%$. Staying in the ERM II does not have to last two years. In the history of staying in ERM II we have had cases of shortening the two-year stay for Italy, Finland and Slovenia. These countries stayed in the mechanism two months shorter. It is also possible to officially agree on a range of fluctuations narrower than the standard one at the request of the EU Member State outside the euro area. Such decisions shall be taken individually and considered an exception. Joining ERM II shall not be subject to the fulfilment of a set of predefined criteria. However, in the ECB's view, participation in ERM II should be smooth, a major economic policy adjustment and a path of reliable fiscal consolidation may be necessary before accession and a path of reliable fiscal consolidation [Wójcik, 2008, p. 33].

During the period of the national currency's stay in ERM II, currency interventions which are automatic and unlimited may be necessary in defence of the permissible margins of fluctuation and may be financed by short-term loans from the ECB [Konarski, 2012, p. 140]. Foreign exchange interventions can be defined as the official sale or purchase of foreign currency by the national monetary authority, most often the central bank of the country concerned, whose purpose is to change the exchange rate of the national currency in relation to one or more foreign currencies [Almekinders, 1998, p. 6]. Interventions to change the appreciation trend of the national currency mean an increase in the supply of domestic money due to the purchase of foreign currency for measures denominated in national currency. And interventions to change the depreciation trend mean an increase in market liquidity, i.e. the purchase of bonds in national currency.

The exchange rate significantly reduces or increases the purchasing power of national money in relation to the newly adopted currency and has far-reaching economic, financial and social consequences, significantly affecting the improvement or deterioration of living conditions in the host country of the euro [Jędrzejczyk, 2014, p. 138]. This means that the adoption of the exchange rate at a sub-optimal level has significant consequences for the country's economy as well as for the rest of the euro area economies. Setting the exchange rate at an overvalued level may lead to an increase in the current account deficit (increase in the risk premium) and consequently to pressure to weaken the exchange rate or to devaluation of the central exchange rate. In turn, this can lead to pressure to reduce the deficit and the need to take action to meet the fiscal convergence criteria. On the other hand, setting the exchange rate at an undervalued level can lead to market expectations for its revaluations, which in turn may contribute to an increased influx of speculative capital, leading to strong exchange rate volatility. Furthermore, it may lead to excessive inflationary pressure and consequently delays in the nominal convergence process, due to the risk of non-compliance with the inflation criterion.

The central exchange rate should correspond to the long-term balance rate at the time of entry into ERM II, which should enable effective defence against speculative capital attacks to maintain the rate within the permissible margins of volatility. The setting of a central exchange rate level is mainly based on the use of market exchange rates for countries claiming entry into the euro area. The experience of ERM and ERM II participants shows that currency interventions are a very important instrument for reducing short-term exchange rate fluctuations within the designated range of fluctuations. This is mainly due to the introduction of the euro at an unfavourable exchange rate for the Member State. Fixing exchange rate basically removes a source of excessive volatility and there is no reason why this volatility should show up elsewhere in the macroeconomic system [Flood and Rose, 1995, p. 30]

3. Experience of Euro Area Countries

The main goals of the ERM II introduction were defined in the abovementioned resolution as: disciplining policies (monetary, fiscal and structural one) in member states with the aim of achieving sustainable convergence and facilitating the adoption of the common currency [Wawrzyniec, 2011, p. 134]. The choice of the level of the central exchange rate is crucial for the stability of the economy. The central exchange rate should not differ significantly from the market exchange rate. The wrong level of the central course undoubtedly leads to quite serious political, fiscal and financial consequences. Setting the central exchange rate at the wrong level carries the risk of market pressure on its change and, consequently, the risk of the candidate country not meeting the convergence criterion. An analysis of the potential effects of the undervalued and overestimated rate indicates that, regardless of whether the exchange rate is too weak or too strong, the consequence may be a weakening of the development potential of the euro area country. Although the economy will adapt to each level of exchange rate in the long term, the cost of these adjustments may be significant. Therefore, the adoption of the exchange rate at the level of balance is very important at the stage of adopting the euro.

3.1 Greece

In the early 1990s, Greece did not meet any of the Maastricht convergence criteria. For this reason, it was not included in the first group of countries that adopted the common currency. Only after two years it managed to meet all the required criteria for the euro area [Karnowski, 2006, p. 189]. The period of 1990-1995 is the sharp increase in the public finance deficit and public debt. Since 1996 within two years, Greece managed to reduce the gap between expenditure and public revenues and could join the euro area in 2001. Drachma, the Greek currency, from March to December 1998, without major disturbances, participated in the ERM system and its course did not exceed the permissible range of fluctuations (2.25%). On the other hand, since the beginning of 1999, the Greek currency has been included in ERM II and its exchange rate has not exceeded the allowable range of fluctuations in the central rate to the euro $\pm 15\%$ [Karnowski, 2006, 189]. Greece participated in the ERM and ERM II mechanism for a total of more than the required 2 years. However, such a situation cannot be considered as a result of the correct determination of the parity rate through an in-depth examination of the equilibrium rate, but this was mainly due to the economic slowdown in Greece and low domestic demand [Rozkrut and Woreta, 2005, p. 25]. Greece to stabilize its own currency against the euro set the central rate above the market rate upon joining ERM II and then revalued the currency when the market exchange rate was rising to the parity rate (Figure 1).

The aim of meeting the inflation criterion resulted in restrictive monetary policy, but relatively high interest rates have contributed to putting pressure on the appreciation of the nominal drachma rate, resulting in a decision to revaluation the central exchange rate of ERM II and the adoption of an overvalued euro exchange rate in relation to the estimated exchange rate. The Bank of Greece has made intense interventions in the foreign exchange market. Currency interventions were conducted 42% of the total number of working days during Greece's stay in ERM/ERM II. The largest amount of intervention took place on 7 May 1999, which amounted to €59 million, representing more than 10% of the average daily turnover on the Greek currency market and around 8% of Greece's official reserves according to Eurostat data. The aim of the intervention was to reduce the excessive pressure on drachma appreciation necessary to maintain its course within the permissible range of fluctuations. Greece disvalued the drachma rate at the entrance to the ERM in 1998. However, already in ERM II the central course of drachma was revalued twice: in 1999 and 2000. However, relatively high interest rates (relative to the ECB's interest rates at the time) have contributed to the pressure on the

appreciation of the nominal drachma rate, resulting in a decision to revaluation central parity in ERM II and the adoption of the euro at a rate overvalued in relation to the balance rate estimates [Karnowski, p. 189].

3.2 Slovakia

Slovakia's economy was subjected to rigors before joining the euro area, leading to the fulfilment of the Maastricht convergence criteria. The achievement of the indicators within the designated framework has enabled Slovakia to enter the euro area since January 2009. In 2008, Slovakia met the convergence requirements, but in the following years it joined the group of countries that did not meet nominal criteria after accession to the euro area, especially fiscal requirements [Ochrymiuk and Rogut, 2010, p. 22]. Despite the fulfilment of the criteria for stabilising the economy, Slovakia's entry into the euro area coincided with the expansion of the global economic crisis and its development in Europe. The moment the economic crisis fully broke out in Europe, the euro exchange rate started to weaken as well. This situation has repeated several times during the years 2009-2011 [Hodula, Vahalik and Dolinova, 2016, p. 345]. The year 2009 brought a marked collapse in economic growth also in Slovakia [Cwiklinski and Pawlowski, 2015, p. 9]. Thus, the outbreak of the global economic crisis was an important factor in extending Slovakia's path to adopting the euro. Slovakia participated in ERM II from 28 November 2005 to 31 December 2008. The accurate determination of the central exchange rate of the euro against the Slovak koruna proved to be important [Borowski, 2009, p. 14]. The prevailing trend during the Slovak koruna stay in ERM II was the appreciation pressure. The central bank has taken several measures to reduce it. However, the effects of the intervention were short-term, which led to an 8.5% revaluation of the central parity on 19 March 2007. The largest intervention took place on 12 July 2006 and amounted to 1750 million euro, representing 65% of the average daily turnover on the foreign exchange market and around 17% of the official, according to Eurostat statistics, of the Slovak foreign exchange reserves. The euro share is a significant determinant in the international foreign exchange reserves [Dvorokova and Kana, 2018, p. 249]. Slovakia's central rate was revalued twice: in 2007, to SKK 35,4424 per EUR and 2008 to SKK 30,1260 per EURO. This exchange rate was considered to be slightly undervalued, which proved to be very favourable, since by October 2008 the deviation of the market rate from the central parity did not exceed 1% [Borowski, 2009, p. 14].

3.3 Baltic States

The accession of the Baltic states to the eurozone, Estonia, Lithuania and Latvia, was their important goal. The adoption of the euro currency meant a decrease in the cost of transactions with partners from the euro area as there was no need to exchange the currency of the transaction. In the Baltic countries this is an extremely important factor due to the structures of trade with EU countries. Joining the monetary union meant eliminating the risk of fluctuations in the exchange rates. In the case of this argument, however, it is worth noting that in all the Baltic countries, Lithuania, Latvia and Estonia, this factor was not so cardinal because of the use of a rigid exchange rate of national currencies against the euro. In all Baltic countries, at the earliest among Central and Eastern European countries, the combination of national currencies with the euro was used as part of the exchange rate policy, thus making a big step towards meeting nominal adjustment criteria [Markiewicz, 2010, p. 110].

In the early stages of the transformation, the Baltic states pursued a heterogeneous exchange rate policy. Estonia implemented a system of stiffened Estonian kroon against the German mark in 1992. Lithuania and Latvia operated a floating rate system due to the insufficient level of foreign exchange reserves at the time. In 1994, Lithuania introduced a fixed exchange rate linked to the US dollar, and Latvia implemented a fixed exchange rate in relation to SDR

[Markiewicz, 2010, p. 116]. In January 1999, when the euro area was created, Lithuania and Latvia changed their currency to the euro, while Estonia converted its parity rate at the German mark's conversion rate into the euro. [Markiewicz, 2010, p. 116]. The choice of exchange rate was determined by the prospect of joining the euro area, building the credibility of central banks, and especially price stabilization. The assumed exchange rate policy, however, led in the following years to a worsening of the trade balance and current account balance as well as rising inflation. Estonia and Lithuania formally joined the ERM II system on June 28, 2004, continuing their exchange rate policy. During the period in ERM II, no significant deviations of the Estonian kroon exchange rate from the designated parity were recorded, as well as significant disturbances in the level of foreign exchange reserves. In turn, since the inclusion of the Lithuanian litas in the ERM II mechanism, the volatility of the litas exchange rate has been moderate. Latvia formally joined the ERM II system on January 1, 2005, and moreover undertook to unilaterally keep the lath rate in the band fluctuating $\pm 1\%$ around the catch rate. In the years 2007–2009, the Latvian lats were subject to severe fluctuations, which eased Latvia's international financial assistance by the IMF and the EU. Exchange rate fluctuations influenced the formation of a serious difference between RIGIBOR and EURIBOR short-term interest rates, reaching even 16 pp. Exchange rate problems translated into instability of balance of payments, and as a result, Latvia applied for help, committing to implement decisive corrective actions. Latvia fell into the trap of a rigid exchange rate, which at the beginning brought a fall in inflation and spectacular economic growth, but in the long run did not allow to conduct its own monetary policy, what is more, it became a source of serious economic problems [Markiewicz, 2010, p. 116].

In 2006, Latvia was the leader of economic growth in Europe and with a GDP growth rate of 11.9%, it was clearly ahead of other Baltic countries (Estonia 11.4%, Lithuania 7.5%), Poland (5.4%), and also exceeded European average (2.3%). It was the fastest growing economy in Europe at that time. However, it did not indicate a stable development of this country when, with such a good result, a high budget deficit was generated (Table 1). A fixed exchange rate system was introduced in Latvia, first for SDR and from 2005 to the euro. Since joining ERM II, Latvia's GDP has grown dynamically, for example from 5% in 2002 to 11.9% in 2006. The basis for rapid growth were given by a stable currency, price stability as the main goal of the central bank and restrictive monetary policy. The macroeconomic balance encouraged investors, while banks developed lending, and the increase in loans granted in foreign currency was regularly over 60%. Increasing inflation, however, meant that foreign obligations of Latvian citizens (in mid-2006) already reached almost 60% of GDP, on the other hand, the price competitiveness of the economy was weakening, which resulted in weakening exports. In Latvia, the rigid exchange rate has become the cause of economic overheating and a sudden acceleration of inflation. Another difficult period for the Latvian currency was March-June 2009, due to the deterioration of the situation of public finances, lowering the rating and investors' fears regarding the implementation of the restructuring program. Although the positive direction was the announcement of budget cut plans by the Latvian government in June 2009, and the adoption of the fiscal reduction package by the Latvian parliament in October 2009, the time to implement these changes was again associated with a significant increase in the exchange rate risk of the Latvian currency. In turn, periods of increased fluctuations in the exchange rates of Lithuania and Estonia were not a special feature of these countries, but overlapped with periods of fluctuations in other Central and Eastern European currencies not belonging to ERM II, as well as fluctuations of the euro to other world currencies [Jedrzejczyk, 2011, p. 137].

4. Conclusion

Stabilisation of the exchange rate of the national currency is important in the process of seeking the adoption of the euro. This is served by the Exchange Rate Mechanism II, in which the national currency should be present 2 years before the country joins the euro area. As the experience of the current euro area countries, whether those entering the monetary union earlier, such as Greece or those taking the euro relatively recently, such as Slovakia, shows that countries with a relatively small currency market may need to use currency interventions to defend the central rate established at the entrance to ERM II, and if necessary, also to change (devaluation or revaluation) of the central exchange rate. Moreover, the rate set at the entrance to ERM II should not be considered as the final conversion rate. For this reason, it is important to verify the balance rate and respond to too far-reaching deviations of the central course from the balance rate. Central parity should be set at an economically justified level, understood as a course of balance. The correct setting of the central exchange rate is particularly important in the context of the fact that the central bank should never defend the level of the exchange rate, which is the exchange rate of imbalance. At the same time, this course should facilitate such market-rate management under ERM II, so that the convergence rate criterion can be met during the period assumed. Experiences of countries which joined ERM II indicate that for stabilization of fluctuations in own currency against the euro countries can choose between the following scenarios of joining the mechanism: fixing the central rate above the market rate (Greece road) and below the market rate (Slovakia road) or fixing the central rate at market rate. Strategies that are unmatched by the market rate allow monetary policy flexibility to be maintained even when the system stays longer and allows it to effectively counteract the inflow of speculative capital. Whereas the strategy of adopting a central exchange rate at market exchange rate level (Baltic States strategy) prevents revaluation, but the exchange rate becomes an anti-inflationary anchor. Controlling the exchange rate level in a state of emergency is another issue. In further research, it is worth analysing the potential effects of an underestimated and overestimated exchange rate in the context of the development potential of a country entering the euro area.

In the current situation of the COVID-19 pandemic, the economic situation of the eurozone limits the possibilities of currency interventions to maintain the rigor of the central rate. This is currently the case for two countries, Croatia and Bulgaria. In the case of Bulgaria, the target date of April 2020 for implementation of the first step for adopting the euro, joining the ERM II, is no longer realistic in the context of the coronavirus disease. Therefore, the first stage is postponed until at least one year. Especially that Bulgaria's central bank unveiled a set of measures that are intended to maintain the stability of the banking system amidst the coronavirus outbreak. At the same time, the measures also aim to strengthen the flexibility of the banking system in order to reduce the negative effects on both businesses and individuals stemming from the restrictions imposed on the economy because of the COVID-19 spread. These actions limit, or even prevent, appropriate reactions in the event of a speculative attack on a currency in the ERM II system. Therefore, Bulgaria will delay the preparatory phase for joining the eurozone until 2021 because of the global crisis caused by the coronavirus pandemic. Croatia in 2019 created a plan containing reform measures that need to be implemented to join ERM II and by March 2020 almost half of the measures committed to have been fulfilled and planning to join the exchange rate mechanism in summer 2020. But according to the IMF, Croatia's economy is set to be harder hit by the coronavirus pandemic than any other country in south-east Europe. But unlike Bulgaria, which has halted preparations for the introduction of the euro due to the coronavirus pandemic and its consequent economic consequences, Croatia's preparations to enter into the exchange rate

mechanism are running smoothly and will continue with the next stage of its plan for adopting the euro despite any adverse effects of the coronavirus pandemic on the economy.

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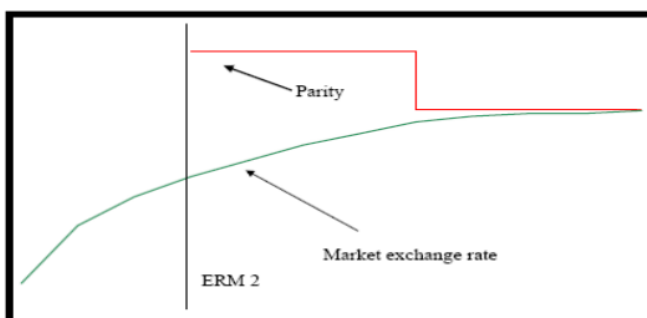
Appendix

Table 1: The Baltic Countries in the Light of Nominal Convergence Criteria in 2009

	Inflation (%)	Budget deficit (%GDP)	Public debt (%GDP)	GDP per capita (% EU)
Estonia	-0,7	1,7	7,2	62,0
Lithuania	2,0	8,9	29,3	53,0
Latvia	0,1	9,0	36,1	49,0

Source: own elaboration based on Eurostat data, <https://ec.europa.eu/eurostat/data/database> [2020.04.01].

Figure 1: Greek Model of ERM II Accession Strategy



Source: Konarski, M. (2012). Interwencje walutowe w ERM II (Currency interventions in ERM II). *Acta Universitatis Lodziensis Folia Oeconomica*, vol. 264, p. 145.

Differentiation of International Estimates of Poverty in Ukraine in the Coordinates of Euro Integration Policy of Sustainable Macroeconomic Development

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Abstract

The paper deals with reviewing of the statements, opinions and estimates on the poverty in Ukraine made by senior officials, experts from the World Bank, IMF, UN, and other international organizations. It was revealed that poverty in Ukraine is chronic and excessive (the poverty rates vary from 25% to 80%). Recently, Ukraine was recognized as the poorest country in Europe. It was ascertained that pursuant to the Bloomberg's Misery Indices and the Legatos Prosperity Indexes, over the recent years Ukraine is one of the poorest and the least prosperous country in the world. Evidence of poverty in Ukraine is. It was ascertained that Ukrainian legislations towards poverty reducing have been implemented insufficiently due to prevailed formal, reluctant approach pursued by the state. It is incompatible with the Euro Integration policy implemented in the country. Poverty reduction and social cohesion enhancing in Ukraine are the mainstreams in terms of implementation of the Ukraine-European Union Association Agreement and the European Social Charter.

Keywords: *European Social Charter, Euro Integration policy, international organizations, poverty, Ukraine-European Union*

JEL Classification: *E60, J21, J23, O11, O38*

1. Introduction

The United Nations Economic and Social Council (UN: 2016) emphasized that “poverty continues to be the greatest global challenge of our time” and many countries and regions in the world poverty, inequality and social exclusion are “increasingly unacceptable”. Eradication of extreme poverty, which is the goal set by the World Bank Group (2018a), is now far from the end and many challenges remain. It is claimed that in many countries, the poorest 40% of population is being left behind and their living standard is actually declining. It is evidently nowadays that poverty remains a multidimensional problem faced any developed or developing country in the world. In the context of global and local crises, the poverty matter becomes more and more significant and the neglect to resolve it hampers the sustainable

development of any country. Poverty is the global challenge calling upon the urgent response and tackling from international community. Therefore, reducing poverty coupled with social inequality is top policy priorities for the state and many international organizations, such as the World Bank and the UN.

Today, poverty reduction is the crucial matter for Ukraine in view of the implementation of the Ukraine-European Union Association Agreement (hereinafter – the Agreement) and other ratified international normative legal documents, such as the European Social Charter, the Sustainable Development Goals (SDGs) etc. Until now, poverty is the vital matter included to the Government's agenda, a defiance to resolve it threatens Ukraine's economic, social and national security.

2. Problem Formulation and Methodology

The paper research's purpose is to scrutiny the recent international assessments of poverty and its impacts on Ukraine. The research questions strive to investigate and give an answer to the following:

- What are modern global poverty trends and major challenges arisen from it in the world?
- How effective is the implementation of national legislations on poverty overcoming in Ukraine?
- How international organizations estimate the poverty rate in Ukraine?
- How does poverty affect the development of Ukrainian society?

The research combines such scientific methods, as qualitative and quantitative (using of statistical data, surveys, its proceeding and analysis for studding the dynamics of Ukraine's ranks in the legato prosperity index in 2013-2018). The mixed approach includes detailed methods, rigorous approach to data collection and analysis. The approach applied in the research can be justified by the following reasons: to understand better the poverty, its problems and fill in gaps arisen at the study; to provide more wider and realistic picture of poverty, its scope and recent trends; to check the qualitative method results with quantitative method and vice versa; to verify and measure the research hypothesis; to appraise the poverty overcoming policy in Ukraine. The research is based on systematic, adherence to ethical standards, skepticism, relativism, and constructivism.

3. Problem Solution

Before the research to commence, it makes sense to conduct a brief *terminology analysis* and clarify the essence of 'poverty' and the related notions, such as 'extreme poverty', 'poverty line', etc. Better understanding of the notions is vital to conceive of this phenomenon correctly, to clarify and provide the bigger map of problems derived from poverty that, in turn, will enable to submit the feasible proposals on poverty overcoming *in the country* examined.

It should be noticed that international organizations, world's countries use different approaches to define 'poverty' and methodologies for its estimating. Thus, according to the World Bank, *poverty* is a deprivation in well-being, which includes low incomes, the inability to purchase basic goods and services needed for survival with dignity. In the World Bank Report poverty is defined as a shortfall in income and consumption, low educational achievement, poor health and nutritional outcomes, lack of access to basic services, and a hazardous living environment (World Bank, 2018a). In other words, the World Bank recognizes poverty as not only the extreme low income and consumption of an individual, but it introduces a multidimensional

approach to its measuring adding such factors, as access to healthcare, education and other social services, affordable housing, electricity, safe drinking water, and sanitation, etc. The UN is considered poverty more broadly as the choices and limitations of possibilities, human dignity violation (Hilorme T. & Karpenko, L. 2018).

In the United States, poverty is treated as the private, voluntary choice made by an individual who has no wish to work and lives below the poverty line. The state regards such individuals as vulnerable social groups' members and provides them the social benefits and assistance. The EU Social Protection Committee defines "poor population" as the number of persons, who are at risk-of-poverty and exclusion according to three indicators (at-risk-of poverty; material deprivation; jobless household). Thus, 'poverty' is defined variously and understood in different contexts. In practical terms, the poor are those, who are involuntary (not by own free will) deprived of affordable housing, food, clothing, education, and medical treatment. Poverty means a lack of basic capacity for effective participation in society, the inability to feed and dress the family, the impossibility to study and to be treated, the lack of sufficient earnings or income.

Historically, poverty has been accepted as an unavoidable phenomenon in a country with underdeveloped economies producing goods and making wealth less than its populations consume and grow. National governments define a 'poverty line' as the minimum income boundary sets legally that estimates the conditions enabled a person (household) to satisfy the minimum physical and social needs in particular period and live a dignified life. *The poverty line* is the minimum income level considered adequate in a particular country (Izha, 2011: 733).

The poverty rate is measured against an *absolute poverty line*. The UN and the World Bank set the *International Poverty Line* and defined *extreme* (or *absolute*) *poverty*. *The global extreme poverty* is cited as '*the international poverty line*', which is the percentage of the particular country's population living on income below the fixed amount of costs expressed in the country's prices in equivalent to international currency, as a rule in US \$. In 2018, *the international poverty line* was reset to US \$ 2.12 a day (in 2015, \$ 1.90/day). There are also the monetary poverty lines less than US \$ 3.20 and US \$ 5.50/day, which are mostly characteristic of middle-income countries. Other types of poverty include the following: *extreme* (*absolute*) and *relative poverty*; *primary* and *secondary poverty*; *subjective* and *multidimensional poverty*, etc. *Extreme* (*absolute*) *poverty* refers as a condition characterized by severe deprivation of basic human needs (foods and clothes, safe drinking water, shelter, access to health, education, sanitation facilities, heating, etc.) resulted from income and access to services. A person is considered to be in extreme poverty if it lives on less than US \$ 2.12/day.

3.1 Global Poverty Trends and Challenges

Let's look from a bird's-eye view at the recent global poverty tendencies and major challenges arisen from this phenomenon around the world. The poverty is both the cause and the effect of the sustainable development in any society. In 2015, the UN General Assembly set in "2030 Agenda" the 17 Sustainable Development Goals (SDGs), where the Goal 1 is "No poverty" (end poverty in all its forms everywhere). Not coincidentally, the matter of poverty eradicating is ranked as the first in the SDGs' list. According to the 2018 global *Multidimensional Poverty Index* (MPI) covering 105 developing countries, where live 5.7 billion people (77% of the world's population): 1.3 billion people (23%) are identified as multidimensional poor; two-thirds of all MPI poor people live in middle-income countries; 85% of MPI poor people live in rural areas; 50% of the multidimensional poor are children aged 0-17. Nearly 800 million

people in the world spend on habitation and food products no more than US \$ 1.25 per day and 2.7 billion people – US \$ 2.25 (Alkire and Robles, 2017).

The Multidimensional Poverty Index (MPI) is an international comparable measure of acute poverty developed by the United Nations development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI). MPI is compounded of income-based poverty measures including the deprivations faced each person with respect to education, health and living standards.

The World Bank's Report (2018b) highlights, in world's countries, 40% of the poorest population is being left behind and their living standards are actually declining in many of them. The findings show that in recent decades income and wealth inequality has increased, but at different rates. Billions of people in the world continue to live in poverty being denied a decent life. Social inequalities and wealth disparities within and among countries become deeper and enormous. Living conditions for one third of the world's population, the total number of which in 2018 exceeded 7.63 billion (UN, 2018: 7), are the poor and do not meet the basic standards of life. Now the world's poor live mainly in conflict-affected and middle-income countries. Military and armed conflicts, low levels of economic development, total corruption, unemployment, crime, and other negative social phenomena are the major factors of poverty in those countries.

As of today, more than 1 billion people still live in an extreme poverty. In many countries, rising prosperity occurs on the background of rising inequality and social exclusion that are the facts morally unacceptable. In this context, fighting poverty in all its dimensions and promoting shared prosperity are commitments and the goals announced by the World Bank (2018a).

In support of the above-outlined, *Oxfam* also claimed of negative global trends in fast escalation of poverty and inequality, their inaccessibility and criticality. The latest *Oxfam's* findings (Interfax, 2019; BBC, 2018) revealed that the gap between the richest and poorest people in the world is widened pushing more and more people into poverty. In 2018, the wealth of the world's richest 26 people was equated with the wealth of 3.8 billion poorest people. Last year, billionaires became richer by 12%, while the poverty level of the poorest fell by 11%. In 2017, the wealth of 43 billionaires was equivalent to the wealth of the half of the world's poorest, respectively in 2016 – 61 and to 2010 – 388. Such redistribution results are 'capture' of half of the world's wealth by few rich individuals, the number of which tends to decrease from 388 in 2010 to 26 in 2018. Such trends in wealth inequality escalate the poverty problems in the world.

Oxfam (founded in 1942) is an international confederation of 19 independent charitable organizations taking actions on global poverty reduction in more than 90 countries.

The World Inequality Lab (2018: 286) revealed that since 1980, income inequality has deepened almost in all world regions. Over the past forty years, some countries have been undergoing transitions from communism toward market economies that were accompanied by large-scale transfers of the wealth from public to private sectors. Ukraine is among such countries. Insufficiently transparency in the transfers and privatization processes have led to an unprecedented rise in social and economic inequality (in wealth, incomes, access to education, healthcare, etc.), and resulted in chronic poverty tending recently to exacerbate in Ukraine.

3.2 Legal Preconditions for Poverty Overcoming in Ukraine

In Ukraine, *subsistence minimum* is the basic state social standard used to assess living standards, determine the right to assign social assistance and benefits, minimum wage, and the minimum age pension, develop and realize social policy and particular social state programs. According to the Law of Ukraine ‘On the subsistence minimum’ (Verkhovna Rada of Ukraine, 1999) *subsistence minimum* is a cost value sufficient for ensuring the normal functioning of a human body, a set of foodstuffs for preserving its health, as well as the minimum sets of non-food products and services needed to meet the basic social and cultural needs of a person. The subsistence minimum is determined normatively per month per capita and separately for those, who belong to the following social and demographic groups: children aged under 6 years old; children aged from 6 to 18 years old; able-bodied (employable) persons; persons who have lost their ability to work (disabled persons). Law of Ukraine ‘On the State Budget of Ukraine for 2018’ (The Verkhovna Rada of Ukraine, 2018).

As of today, the poverty reduction has acquired increasing importance matter for Ukraine in terms of the Ukraine-EU Association Agreement implementation. The Agreement provides for a series of reforms in the political, economic, social, and other spheres of society, the qualitative and effective completion of which must enable to reduce poverty in Ukraine. Article 420 (k) of the Agreement pursues the goals: to reduce poverty and enhance social cohesion. Ensuring the right to protection against poverty and social exclusion is the priority of the European Social Charter ratified in 2006 by the Verkhovna Rada of Ukraine. Article 30 of this Charter stipulates for “every person has the right to protection against poverty and social exclusion”. In the Charter, Ukraine has undertaken commitments to fight against poverty and social exclusion in the country. The practice has proved that the Government’s efforts to overcome poverty are not sufficient. The European Committee of Social Rights concluded that the situation in Ukraine was in breach of the ratified European Social Charter, as Ukraine “has not been established that there is an effective overall and coordinated approach to combat poverty and social exclusion”. Thus, it can be argued that the effectiveness of implementation of these documents is critically low, and the applied approach to poverty reduction is mostly formal. In the modern realities of Ukraine, the poverty is largely both a cause and a consequence of the systemic crisis in the country.

Protection against poverty and social exclusion matters are assigned to the Cabinet of Ministers of Ukraine (the highest body of state executive power serving as the Government in the country). The Cabinet solves the matters through development and implementation of poverty overcoming policy. The Ministry of Social Policy of Ukraine is obligated to provide coordination, analytical support on poverty overcoming and monitoring of poverty rates. The Cabinet of Ministers of Ukraine (2016) approved the Strategy for Poverty Overcoming, wherein the objectives in accordance with Ukraine’s Sustainable Development Goals are determined. In the National Report (Ministry of Economic Development and Trade of Ukraine, 2017) the poverty overcoming has been identified as a key challenge for Ukrainian society and the determinant of its development. These documents outline the objectives and measuring indicators for the poverty overcoming.

In Ukraine from 1990 to 2018, twenty two Governments (the Cabinets of Ministries of Ukraine) and 8 parliament’s convocations (the Verkhovna Rada of Ukraine) have been formed, as well as the number of State Concepts, Strategies and Programs for overcoming poverty in the country have been adopted. However, its implementation effectiveness is relatively low and poverty overcoming policies are substantially characterized by inconsistency, political populism and declarative nature. The pre-election promises of Ukrainian politicians to reduce poverty and improve the welfare of citizens remain largely unfulfilled. The common and

unconcealed among politicians is the trivial assertion that poverty is a global and inescapable phenomenon inherent to any society including Ukrainian one.

3.3 Poverty in Ukraine – the Viewpoints of Senior Officials from International Organizations

Satu Kahkonen (Ukrinform, 2018), World Bank Country Director for Ukraine, Belarus and Moldova, affirmed that due to the economic crisis the poverty rate in Ukraine is now higher than 5 years ago. In 2014, when the crisis has commenced, 15% of Ukrainians lived below the poverty line. However, over the last years, the share of poor Ukrainians living under the extreme poverty line has increased from 15% (in 2014) to 25% (in 2018). Kahkonen emphasized that a real way out of the crisis in Ukraine is to complete the reforms launched in various spheres.

Neal Walker, UN Resident Coordinator and UN Development Program (UNDP) Resident Representative in Ukraine, presenting the UNDP's Human Development Report claimed that approximately 60% of Ukrainians live under the poverty line, including 1.7 million Internally Displaced Persons (IDPs) and 2.8 million people with disabilities (UNIAN: 2017). Similar poverty rate in Ukraine confirmed *Andriy Reva*, Minister of Social Policy of Ukraine, who claimed that 'approximately 60% of Ukraine's citizens are under the poverty line, while about 50% of household income was being spent on food' (Gordon: 2017). Based on other UN experts' data (Ukrpress, 2017), more than 80% of Ukrainians live below the poverty line. Moreover, the minimum consumer basket of Ukrainians is in the hidden famine state and the subsistence minimum in Ukraine approaches poverty lines of Africa's countries.

Evidence of poverty in Ukraine is an expert data from *the World Food Program* (2015), according to which 1.3 million Ukrainians needed emergency food assistance because of conflicts in the Crimea, Donetsk and Lugansk regions. Due to the political and economic shocks in Ukraine, the cost of living and the basic food basket have become significantly more expensive (up to 42% in 2015 compared to 2014) across the country. The most vulnerable people are IDPs, returnees, host families and those, who trapped in the hotspots and affected in the conflict areas.

The economic crisis coupled with the events in the Crimea and the military conflict broken out in Eastern Ukraine led to the unprecedented increase of the poverty rate in the country. As of February 2017, resulting from the conflict, at least 9800 people have died and over 2.7 million people have become forced displaced persons, including 1.7 million inside (IDPs) and 1 million outside (EDPs) Ukraine (World Bank, 2017: 5). Large families, single mothers with children, rural, unemployed and aged women that are displaced persons suffer from poverty more heavily (Spear, et al, 2016: 21).

Due to the conflicts in the Crimea, Donetsk and Lugansk regions, a completely new notion of 'sudden poverty' has appeared in Ukraine, the phenomenon, which the country did not face before. *Libanova Ella*, Director of the Ptoukha Institute for Demography and Social Studies under the National Academy of Sciences of Ukraine, emphasized, "the most of people yesterday owned all they needed – homes, jobs, businesses and pensions, clearly defined social status and being self-sufficient. However, they instantly lost [*because of the conflict*] everything and turned into refugees in fact. And this further exacerbated social problems, which we had a lot before" (Trade Unions Federation of Ukraine, 2018). Indeed, the conflicts have led to the increase in the country's poverty rate and impoverishment of Ukrainians.

According to expert estimates of the *Borgen Project* (2017), in 2016 Ukraine ranked the second (above Moldova) poorest country in Europe. However, in 2018 the IMF reported, Ukraine has

become the poorest country in Europe in terms of the official average wage. Ukraine suffers from high unemployment rates that increased from 7.2% in 2013 to 9.9% in 2017 that result in growing poverty rates. *Mark Blekherman (2018)*, the Project's expert, highlights other reasons of poverty in Ukraine, such as political corruption and the military conflict in Crime and eastern Ukraine. These have caused the country's lost 4% of GDP and the decrease in foreign direct investments. The economic recovery is rather slight and national economic infrastructure is weak, incapable of competing in the global economy because of outdated, the Soviet era's production models.

It is well-known, the poverty level is correlated with social inequality, which manifests itself in income and assets inequalities in any country. The greater the gap in these indicators, the higher the poverty rate in the country, the more asocial such a society is considered. In this context, *Hugues Mingarelli*, Head of the EU Delegation to Ukraine, emphasizes on a social cohesion in Ukraine, where the income inequality level is simply unacceptable. In his opinion, under conditions, when the vast majority citizens of Ukraine try to survive, while hundreds of expensive cars (Porsche, Ferrari, Lamborghini) drive along the streets, it is impossible to achieve the sustainable economic growth in the country (UNIAN, 2018).

By estimates of *Cyril Muller*, Vice President of the World Bank's Europe and Central Asia region, the total net assets of the three richest in Ukraine individuals exceeded 6% of the country's GDP (1.4% compared to USA). The percentage is almost twice as many as in Russia and three times more than in Poland. Since 2007, the income share ratio of the richest individuals to the GDP has remained almost unchanged. It should be noted that these estimates are quite optimistic, as they have been made on the official assets declarations of the richest individuals nonregistering their own real estate, cash, and the 'shadow' schemes. This gives grounds to argue that the numbers of their real wealth are probably understated at least three times. According to the research conducted by the magazine "Focus" (2018) jointly with investment companies, the 100 richest people in Ukraine own assets of US \$ 26 billion, which is equated to one third of the total State Debt or 68% of the State Budget 2019. Over the year, the total capital of the richest Ukrainians grew up by US \$2 billions. In other words, it is about a few oligarchs in Ukraine possessing huge assets and resources. How did these individuals take possession over the billions? After all, 25 years ago their wealth rates were almost the same as many other citizens in the country. If few individuals become richer, why have their fellow citizens become poorer?

Summarizing the given above statements, there is obvious evidence to frame two major theses. The first one is that despite differences in the poverty estimations and indicators used, poverty rates in Ukraine are still unprecedentedly high. The second one is that poverty overcoming policy in Ukraine is presumably an ineffective. To confirm or refute validity of the second thesis, it is reasonable to examine commitments to the poverty overcoming undertaken by the state in Ukraine, relevant legislations and regulations adopted.

According to the *Bloomberg's Misery Index*, over the recent years Ukraine is one of the ten countries with poorest economy in the world. So, if the country in 2013 ranked 23th (index 57.8%), then in 2015 – 4th (27.0%), in 2016 – 5th (26.3%), in 2017 – 5th (23.8%), and in 2018 – 7th (17.8%) (Jamrisko, 2018).

Bloomberg L.P. is a privately held world company providing global financial, media and other information.

Misery Index is developed by Arthur Melvin Okun, an American economist, which sums inflation and unemployment outlooks in 66 countries.

The Legatum Prosperity Index is an annual ranking developed by the Legatum Institute (London-based think-tank investigating the poverty and prosperity issues globally) measuring national economic growth, wealth, personal well-being, education, health, and quality of life.

Venezuela, Argentina, and South Africa have been shown the last rankings, whereas Thailand, Singapore, Switzerland and Japan have topped the list. Taking into account the Index, one can assume that Ukraine was one of the poorest countries in the world in 2015, having increased its stand to three positions in 2018. Evidence of poverty in Ukraine is *the Prosperity Index*, some ranks of the world's countries are shown in the Table 1.

Table 1: The Dynamics of Ukraine's Ranks in the Legatum Prosperity Index, 2013-2018

2013		2014		2017		2018	
Rank	Country	Rank	Country	Rank	Country	Rank	Country
1	Norway	1	Norway	1	Norway	1	Norway
2	Switzerland	2	Switzerland	2	New Zealand	2	New Zealand
3	Canada	3	New Zealand	3	Finland	3	Finland
...
63	Uzbekistan	62	Sri Lanka	111	Bangladesh	110	Malawi
64	Ukraine	63	Ukraine	112	Ukraine	111	Ukraine
65	Belize	64	Mexico	113	Burkina Faso	112	Burkina Faso
...
141	Central African Republic	141	Chad	148	Sudan	148	Central African Republic
142	Chad	142	Central African Republic	149	Yemen	149	Afghanistan

Source: Compiled by the author on the basis of <http://www.prosperity.com/about/resources>.

It can be seen, if in 2013-2014 Ukraine ranked 64 and 63 (of 142 countries examined), then in 2017-2018 its ranks worsened almost in twice by 112 and 111 (of 149 countries examined). The last years, the country shares its ranks with the least developed countries, such as Burkina Faso, Malawi, and Bangladesh. Countries of the Scandinavia (Norway, Finland, Sweden, Denmark), Western Europe (the Netherlands, Great Britain, Germany, Ireland), New Zealand, Canada, Australia, Singapore and the US, are constantly at the top in the Prosperity Indexes' tables. Slovenia, the Czech Republic, Estonia, Poland and Latvia are the most 'prosperous' post-communist countries (Lipkova L., 2012; Stanickova M., 2018).

Having compared *the Legatum Prosperity Index*, *the Bloomberg Misery Index*, *the Poverty and Shared Prosperity Report* (The World Bank, 2018b: 42-45), it can be revealed certain links and correlation between the poverty, social welfare and the economic growth: poverty rates are lower in developed (wealthy) countries, meanwhile in countries underdeveloped and developing (poor) poverty rates are higher. It can be assumed that in the developed countries, the levels of the economic growth, financial and other resourcing, budgetary social expenditures and social welfare, employments, living standards and living conditions are relatively higher. Surely, under such circumstances the citizens have more opportunities to live

better avoiding the poverty. Conversely, due to low budget revenue and social expenditures, household income, low wages, unemployment, social benefits and pensions, etc the living standards and living conditions are relatively worse in the underdeveloped and developing countries. At the same time, in these countries social stratification and polarization by the wealth distribution criterion are rather deeper.

3.4 How Poverty Affects the Development of Ukrainian Society

Poverty may very likely result in undermining of the national economic growth and social security, aggravation of the crises, appearance of new social conflicts in Ukrainian society. It may bring to expanding and deepening of the 'social bottom' and serious social, economic and political consequences, which are unacceptable for Ukraine seeking an independent, legal, social, and democratic state. The large-scale poverty leads to social discontent among the population, boosts social protest moods that may lead to strikes, mass meetings and social protests. It can also provoke calls to change the government and destabilize a society. Apart from economic, social, and political influences on a society, poverty has demographical affects. According to sociology (Lyashko, 2018), 55% of Ukrainians intend to leave the country because of miserable wages and pensions. Referring to the Interfax-Ukraine (2018), migration from Ukraine is growing up, approaching the critical verge and threatening the country's economic security. Olga Krentovska, the First Deputy Minister of Social Policy of Ukraine, stated that in the country from 2013 to 2016 the number of economically active population aged 15-70 has decreased from 21 million to 18 million. 71% of Ukrainian labour migrants called miserable salary and poverty the main reasons for migration abroad. According to expert estimates, now, up to 5 million Ukrainians work abroad. Today Ukraine is a leader in EU immigration statistics, whose citizens are being welcomed in European labour markets. Demand for Ukrainian labor migrants is increasing most in Poland, Hungary, Slovakia, Lithuania, Croatia, and the Czech Republic. According to the Polish Gazeta Prawna, from 2014 to 2018 the migration flows from Ukraine to Poland increased by 350%. Last year Poland issued to Ukraine's citizens 1 million 700 thousand or 85% of all work permits for foreigners, who pay therein contributions to the social insurance funds. The depopulation (population decline) caused partly by poverty coupled with implications of the armed conflict, immigration, insufficient nutrition and access to healthcare is another negative demographic consequence and shock to Ukraine. According to the State Statistic Service of Ukraine, there is the clear tendency to decrease of population by 3.4 **million** for 5 years – from 45.55 million in 2013 to 42.15 million in 2019. The total Ukraine's population has reached its maximum in 1993 – 52.24 million and its minimum in 2018 – 42.2 million. Last year, in Ukraine for every 100 dead accounted for 58 births.

4. Conclusion

Based on the above-stated it may conclude the followings.

Despite the progress made recent years toward extreme poverty elimination in many world's countries and regions, poverty is still the greatest global challenge. Nearly 40% of the world's population are denied a decent life and live in poverty – mainly in such countries as conflict-affected, with middle-income, underdeveloped economies, high levels of corruption, unemployment, crime, etc. Because poverty considerably effects and determines the sustainable development of any society, then poverty overcoming matters are to be put on every country's state policy agenda.

Poverty reduction and social cohesion enhancing in Ukraine are the mainstreams in terms of implementation of the Ukraine-European Union Association Agreement and the European Social Charter. Ukraine's Government has also approved the Strategy for Poverty Overcoming toward 2010. Nevertheless, these legal acts are being implemented insufficiently due to the reluctant state's approach to pursue the mainstreams. The effectiveness of the legislations implementation is rather low and the applied approach to poverty reduction is mostly formal. The poverty rate is incompatible with the objectives declared in the Agreement and the state policy on Ukraine's joining to the EU.

Statements and estimates of senior officials from the World Bank, UN, IMF, EU and other international organizations are convincing proofs and evidence of large-scaled poverty in Ukraine. Apparently, the poverty in Ukraine is enormous, characterized by endemic and chronic features. Differences in Ukraine's poverty ratios (varying from 25% to 80%) can be explained by various poverty lines values reset by UN and World Bank. Pursuant to the IMF's estimates, in 2018 Ukraine was the poorest country in Europe in terms of the official average wage. According to the Bloomberg's Misery Indices, over the recent years Ukraine is one of the ten countries with poorest economy in the world. Evidence of poverty in Ukraine is the Legatum Prosperity Indexes.

The poverty affects Ukrainian society and challenges seriously the country's sustainable development in the following ways: to undermine the economic growth and social security (deepening of the 'social bottom'); to destabilize a society politically; to violate human rights and democratic values; to aggravate the demographic crisis, etc. In the modern realities of Ukraine, the poverty is largely both a cause and a consequence of the systemic crisis in the country.

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Structural and Wave Analysis Energy Policy of Ukraine in the Context of European Integration

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Abstract

Due to the synchronization of the energy systems of Ukraine and Europe, electricity will become cheaper, and Ukraine will become the link between the Baltic and Black Sea energy markets. The level of energy consumption in Ukraine is excessive. Therefore, the main priority should be the promotion of energy efficiency and the development of renewable energy sources. The global oil market environment is an important factor for macroeconomic, investment, innovative and geopolitical decisions. There is a widespread belief that oil prices are almost impossible to be predicted, as they depend on the uncertainty of current and future supply and demand indicators and on a variety of other random factors. The article attempts to show that although the market is difficult to predict, it is quite logical. In the work, the authors consider the mechanism for implementing Energy Strategy 2035. The problems of each stage and the real plans of the state to reform the energy sector of Ukraine until 2035 in the context of European practice are analyzed.

Keywords: energy European integration, energy policy, energy sector, energy sources, export, forecast, import, oil market

JEL Classification: E60, M21, M29, O32, O38

1. Introduction

The problem of rational using of energy resources, energy efficiency and energy security is a necessary condition for the harmonious economic and social development of Ukraine in the conditions of its European integration. Provision of all spheres of Ukraine economy with different types of energy, fuel acts as one of the most important tasks of the management system, economic policies of the country, a prerequisite for its successful and harmonious development. The formulation and implementation of Ukraine's energy policy is extremely important an important component of economic policy in general and further European integration. Only good complementarily economic and energy policies will allow for a harmonious development countries in the context of European integration. In conditions of limited energy resources is acute there is a problem in their efficient use, geographical and

other types diversification of energy products by Ukraine. Import diversification and export of energy products will also foster development energy area, and, accordingly, and the economic security of Ukraine through delimitation from the main the supplier of these resources – the Russian Federation. Improvements energy supply will help create conditions for harmonious economic development Ukraine will increase the level of energy efficiency and higher level of economic and national security of Ukraine in the coordinats of European integration.

Research of energy policy countries in the context of European integration, its structure and methods for evaluation, forecasted estimation and predictive validity electricity production, innovation trends of energy policy was investigated in the works by scientists of different countries: (Bushuev V., 2019), (Dziubanovska N., 2019), (Ictisanov V., 2019), (Frankova S., 2016), (Hilorme T., 2018), (Karpenko L., 2019), (Lipkova L., 2018), (Panina A., 2019), (Staniskova M., 2018) and others. Scientists-economists presented the results in the area of improving the mechanisms of energy policy in the context of European integration and globalization changes. The issues of financial and economic policy at the state level are studied in detail. In the article there is the author's approach to the structural-wave analysis of energy policy. The author's approach in the coordinates of industry analytics and prognostic validity will strengthen existing developments in this research topic.

2. Problem Formulation and Methodology

The aim of the work consists of studding the structural and wave analysis energy policy of Ukraine in the context of European integration; the mechanism for implementing Energy Strategy 2035; the analyse of the European practice of successful energy policy and the preconditions for the development of energy policy in Ukraine. The problems of each stage and the real plans of the state to reform the energy sector of Ukraine until 2035 in the context of European practice are analyzed. The article presents a predictive assessment of the level of electricity production by the method of trend extrapolation based on statistics of the energy balance of Ukraine.

General theoretical and economic-statistical methods were used in solving the tasks. The methodological basis forms a number of the following methods: scientific abstraction, classification and systematization – to identify the main components of the energy policy formation; methods of forecasting based on trend extrapolation and revealing functional dependence – to study trends in the volume of electricity production in Ukraine, determination of predictive validity by the trend extrapolation method for 2020-2028; methods of dialectical and formal logic, analysis and synthesis, systematic approach, decomposition method – for the development of managerial tools and methodological support for the modelling the energy efficiency system in Ukraine's energy policy.

3. Problem Solution

The EU's common energy policy is the basis for the development of a modern Community industrial model. It ensures the efficient functioning of the EU's common energy market, secures energy supplies to the European Union, promotes energy efficiency and develops new and renewable forms of energy. Under the Association Agreement, Ukraine has committed itself to implementing the EU's Third Energy Package, which should make the Ukrainian gas and energy markets more open. The main purpose of these changes is the integration of Ukraine into the European energy markets and the transition of the national grid to a low carbon path of development that will ensure energy availability for the end consumer and high security of energy supply (Panina A., 2019).

“Energy Strategy of Ukraine (ESU) for the Period up to 2035“ Security, Energy Efficiency, Competitiveness ”is a document that outlines the strategic guidelines for the development of the fuel and energy complex of Ukraine for the period until 2035. The projected indicators show the trajectory of energy and related industries. Implementation of the ESU is envisaged in three main stages:

1) Reform of the energy sector (until 2020). Over the next three years, the main focus will be on implementing reforms and creating a competitive and attractive investment environment.

2) Optimization and innovative development of energy infrastructure (until 2025). The second stage of implementation of the energy strategy will be focused on the work in the conditions of the new market environment and the actual integration of the Ukrainian ESU with the European energy system, which will significantly affect substantiation of the choice of objects for reconstruction or new construction in the energy sphere and for improvement of energy efficiency.

3) Ensuring sustainable development (until 2035). The third phase of the ESU is aimed at innovative development of the energy sector and the construction of a new generation.

Further in the work, it seems appropriate to consider the issues of Energy European integration: how synchronization with the western energy system will affect Ukraine. The energy policy of Ukraine is aimed at direct integration with European politics. Due to the synchronization of the energy systems of Ukraine and Europe, electricity in Ukraine will become cheaper, and Ukraine will become a bridge between the Baltic and Black Sea energy markets. Only for this it will take a long time and a considerable amount of money. In Ukraine, preparations have begun to synchronize the domestic United Energy System with the European ENTSO-E. During the 5th annual Ukrainian Energy Forum, Deputy Minister of Energy and Coal Industry Vadim Ulida said that this project will be implemented until 2017. Automatically, this means a separation from the post-Soviet United Energy System, thanks to which the energy sectors of Ukraine, Russia, Belarus and Moldova now mutually support each other. Now, a similar regime will work with Poland, Slovakia, Hungary and Romania. From a separate system that dumps excess currents to European consumers, Ukraine will turn into a link between the Black Sea and Baltic sections of the European energy system (National Institute for Strategic Studies, 2015).

An important vector of Ukraine’s energy policy is changes in exports and orientation towards Europe. This is advantageous, first of all, because Ukraine will be able to freely export surplus currents to European countries, and therefore, more fully load domestic stations. Now the export capacity to the EU is limited, since it can be carried out only from the energy island of Burshtyn TPP, operating in parallel with ENTSO-E, and through a small DC insert on the border with Poland. As a result, according to the Ministry of Energy and Coal Industry, in 2018, 5.4 billion kilo-Watts was sold in this direction. With the synchronization of Ukrainian and European energy systems, exports can be increased to 25-30 billion kilo-Watts even without the construction of new power units (Razumkov Centre, 2015).

In general, the commercial activities of DTEK energy holding Rinat Akhmetov remain the largest seller of Ukrainian current abroad in 2020. In 2013, the holding company sold abroad 9.83 billion kilo-Watts in the amount of 4.5 billion UAH. There are other advantages of such a government decision. Firstly, European energy operators will be able to work in Ukraine, which means that there will be real competition. The energy policy of Ukraine has two objectives in this: generate electricity, sale (export) of electricity.

The experience of Poland showed that the country went through a similar process about 15 years ago, when the Eastern European energy system called CENTREL merged with the

Western European system, then it was called UCTE. Finally, competition will reduce tariffs. This is beneficial to consumers, but can damage generation. In Poland, prices have fallen by 30% over the past 4 years due to competition with German current suppliers (now one kWh of electricity in Poland, taking into account the cost of delivery, costs consumers 0.5 zloty (UAH 1.94). In such conditions, it is difficult to build new blocks or reconstruct old ones. Therefore, Poland reduced its own production, and there was an opportunity for the arrival of Ukrainian current (Iktisanov V., 2019).

Ukrainian prices for electricity for consumers are not very expensive. So, even after the last increase carried out by the National Commission for Regulation in the Energy Sector, depending on consumption volumes, Ukrainian consumers dance to 1.68 UAH. per 1 kilo-Watts. At the same time, disconnecting from the Unified Energy System as a whole poses few problems. Until 2001, Ukraine worked separately from Russia and did not experience any particular inconvenience. At present, the reliability of individual energy centres in the country will decrease, but not critically. Such problems can be solved through the development of individual sections of networks. The greatest problems may arise in some border regions of Ukraine and Belarus, to which several dead-end power lines lead to both sides, which is why some areas are supplied with electricity only from a neighbouring state. Most likely, power system operators will have to lay new wires to them. Finally, the export of electricity to Belarus, which last year purchased 3 billion kWh of Ukrainian current in the amount of \$ 191.7 million (according to the customs data of Ukraine), will require additional technical solutions, for example, installation of DC inserts at the border.

Energy policy involves investments in the amount of 4-5 billion UAH. The main difference between ENTSO-E and the current Ukrainian energy system is the stability requirements for the frequency of the current produced by power plants and transformed at substations. Synchronization is a long process that requires: research, investment, the implementation of a number of technical measures, coordination with neighbouring countries in the east and west. The energy policy provides for such areas of work for 8-10 years, and not 2.5 years, as promised by the Ministry of Energy and Coal.

The Ukrainian energy system is one of the largest in the EU. The installed capacity of the power plants operating in it amounted to 54.5 GW by January 1, 2017. Moreover, according to Ukrenergo, the company services more than 22.6 thousand km of power lines. And this will require considerable investments.

The most difficult part for Ukraine is the technical side of the problem – replacing automation at generating stations that would better maintain the frequency, and reconstructing backbone networks. Different power units had different investment programs; some could be brought to the necessary state earlier, others later. And it was necessary to synchronize all this. But the organizational factor was also important – the change in technical regulations and the organization of the networks. If there will be a major accident on the territory of Ukraine, it is necessary that it does not really affect other countries. For this, the rules of work of not only the system operator – in our case, it is NEC Ukrenergo – but also of energy distribution companies, are changing. However, domestic oblenergos have a different opinion on this. According to the head of the board of Chernigovoblenergo (36.6% each are owned by Igor Kolomoisky and Konstantin Grigorishin), Yuriy Boyko, 95% of the problems that arise when the electric networks switch to work in ENTSO-E belong to the competence of the system operator – Ukrenergo.

It practically does not concern distribution networks. Everything related to repairs, does not affect synchronization, and only concerns improving the quality of customer service. This, of course, is also very important, and it must be implemented, but synchronization can be carried

out before Ukraine reaches the European quality of current supply. All of the above activities will cost a lot: in 2015, the Energy Strategy of Ukraine includes a sum of 4 billion UAH, at that time – about \$ 800 million. However, it is worth re-evaluating with the involvement of European experts, raising current requirements for generation and networks.

In Poland, the technical component of the project itself pulled no more than \$ 100 million, but this is not taking into account large-scale projects for the reconstruction of power units and organizational measures. But, according to estimates by the Russian Ministry of Energy and Coal, integration into the European energy system will provide an additional investment inflow of about \$ 4-5 billion.

Finally, Ukrainian companies will have to learn how to sell electricity in a new way. Ukrainian kilo-Watts must be competitive. After all, electricity is a special product, the price and flexibility of the offer is important here. Ukrainian companies practically do not know how to sell electrics on a complex schedule, but mainly implement the “base” – continuous round-the-clock deliveries. As you can see, there are many problems on the path to energy European integration. But this can and should be done. The main thing is not to interfere with politics. First of all, this is a technical issue.

The next step of the study is considered appropriate to consider the policy of the State Enterprise "Energoatom". The largest monopoly company of Ukraine includes four operating Ukrainian nuclear power plants and 15 power units. In January 2020, the general production company provided about 75% of the population and production needs of Ukraine, and an average of about 55% a year. According to Eurostat, Ukraine ranks eighth in the world in terms of installed NPP capacity. The 2018 statistical reports are the best and showed that Ukraine ranked third in the world in terms of total NPP electricity generation. This was the basis for the formation of a strategic plan for the development of the company until 2022. "Energoatom" cooperates with the Ukrainian Nuclear Forum Association and the Ukrainian Nuclear Society at the national level, as well as with the international companies of WANO, WNA, EUR, INPRO. "Eregioatom" is represented by four nuclear power plants - Zaporizhzhya, Rivne, Yuzhno-Ukrainian, Khmelnytsky, which differ in concentration but complement each other geographically, has a representative office in Brussels. In 2015, the Memorandum "Energy Bridge Ukraine – European Union" was signed in Kyiv. This Memorandum was signed after six months of preparation between Poland and Ukraine, "Eregioatom" and "Polenergia", the heads of "Energoatom" President Yuri Nedashkovsky, and Polish Vice President of "Polenergia" Grzegorz Stanislawski. The objective of the financial direction of the Memorandum is the completion of the third and fourth units of Khmelnytsky NPP. The Cabinet of Ministers participated in the feasibility study of the project. Working contacts have been established, which helps to bring the large-scale project closer to practical implementation. The financial and economic component of energy policy between Poland and Ukraine has some basis, shows friendly relations between countries.

The main purpose of the tripartite Memorandum, also signed by Ukrenergo, is to evaluate the feasibility and implementation of the Trans-European Energy Network (TEN-E) project "Ukraine-EU Energy Bridge". The project is also part of the Baltic Energy Single Market Plan (BEMIP), launched at the initiative of the European Council in 2008. Among the tasks facing the participants of the project "Energy Bridge Ukraine – European Union" is the commissioning of the 750 kilo-Watts Khmelnytsky nuclear power plant (NPP) – Rzeszow (Poland) line, which will allow the use of the available NPP capacities without restrictions, provided the electricity surplus ensures its export to EU and invest in the completion of Khmelnytsky NPP Units 3 and 4. Today, modernization is planned and is being carried out at

the NPPs of Ukraine, after which they will meet all the technical conditions of connection to the ENTSO-E network (National Institute for Strategic Studies, 2015).

Unfortunately, the main conclusion of this work was that all of these numerous factors have an ambiguous, often multidirectional and inconsistent – in force and time – impact on price dynamics. In addition, prices themselves have an impact on these factors (demand, investment, exchange rates, inflation expectations, geopolitical decisions, etc.). Therefore, multifactor models do not yield a satisfactory result when forecasting global market conditions over the mid-term. This work also showed that the dynamics of prices on the world oil market are determined not so much by physical factors of supply and demand (they mainly bring only fluctuations into the overall harmonic curve), but mainly by financial and economic reasons. Oil on the world market is primarily a financial asset, and its price is formed in the futures market of financial derivatives. Strictly speaking, it is wrong to set one factor against another, and the behaviour of players in the "paper" oil market is determined by many factors, both physical and financial, macroeconomic and geopolitical. The price is formed in the futures market through the prism of expectations of its participants in relation to expressed and predicted factors. Thus, the price level is the result of transactions of oil-market participants driven by expectations regarding the price in the future, adjusted for price volatility. The main components of the energy policy formation the context of globalization changes are systematised in the Table 1. The mechanism of energy policy development is based on the state regulation of the country's economic development and consists of three blocks for studding the research issues.

Table 1: The Mechanism of Energy Policy Development

State regulation of the country's economic development	The main components of the energy policy formation		
	Block 1	Block 1	Block 1
	1. Investment policy	1. Technological development	1. Macroeconomic events
	2. Innovation policy	2. IT technology	2. Microeconomic events
	3. Availability of free capital	3. Market researches	3. Balance of the world energy markets
	4. Cost of money	4. Economic-statistical forecasting	4. World energy pricing
	5. Stock market and commodity market state	5. Stock changes	5. Geopolitical situation and military conflicts
	6. Monetary policy and inflation expectation	6. Physical demand changes	6. Foreign economic policy
	7. Economic, legal and political channel	7. Physical offer changes	7. European Integration

Source: systematized by the authors

The key to understanding this arrangement is that changes in the physical oil market, as well as in other economic markets, do not directly affect price, since they do not have a direct impact on the oil market, but have an influence through the main players, their psychology and perception of those or other economic, macroeconomic and political events. It is the psychology of traders who react differently to current, and especially to expected events that determines their individual and collective behaviour in the market. It should be noted that in

parallel with the actions of market participants, which lead to price movements in a certain direction, there are also external agents – central banks and government agencies, participants in other financial markets, risk managers of companies that indirectly affect pricing. The channel of this impact is macroeconomic policy, operations in the foreign exchange market and other actions that affect not only oil price, but also the availability of capital for market participants. The main objective of the actions of these agents is to stabilize the current situation, both in the context of monetary policy and in the context of risk management (Bushuev V., 2019).

The period 2019-2020 is characterized by a decrease to 50-55 dollars in price after the surge in 2018. That said, during 2021-22, we can expect a return of prices to the level of 65-70 dollars per barrel.

The next we are going to investigate the issues of cooperation between Ukraine and the EU in the area of energy policy. The EU-Ukraine energy cooperation strategy is set out in the Memorandum of Understanding between Ukraine and the EU on energy cooperation (Memorandum), signed on 1, December, 2005. The provisions of the Memorandum provide for the implementation of road maps in the following directions: nuclear safety, integration of electricity and gas markets, improving the security of energy supply and transit of hydrocarbons, raising safety and environmental standards in the coal industry, energy efficiency (National Institute for Strategic Studies, 2015). During the years of implementation of the Memorandum, a number of results were achieved in the directions foreseen within the roadmaps.

Some words about *integration of electricity and gas markets*. During 2014, Ukraine presided over the Energy Community, a full-fledged membership in which our country has acquired since February 1, 2011. In the context of membership in this organization, a large-scale work is being done to bring the national regulatory framework into compliance with the requirements of EU legislation. The procedure for implementation by Ukraine of obligations within the framework of membership in the Energy Community by introducing necessary amendments to the legislation of Ukraine, it was determined at the disposal of the Cabinet of Ministers of Ukraine No. 733-r of 03.08.2011 on the Plan of measures for fulfilling Ukraine's obligations within the framework of the Energy Community Treaty. In particular, measures to adopt laws of Ukraine "On the principles of functioning of the gas market" and "On the principles of functioning of the electricity market", as well as the CMU's resolution "On urgent measures to reform the management system of the Unified Gas Transport System of Ukraine", were among the priority steps in this area, which provides for the separation of Naftogaz of Ukraine and creation of public joint-stock companies "Main gas pipelines of Ukraine" (National Institute for Strategic Studies, 2015).

In March 2015, the CMU approved a gas sector reform plan agreed with the World Bank and the Energy Community Secretariat, which envisages the restructuring of Naftogaz of Ukraine. Due to the need for a large amount of work to prepare and adapt laws and regulations, Ukraine needs technical and financial assistance. In this regard, the EU is supporting Ukraine, in particular through an additional technical assistance project annexed to the Budget Support Program for Ukraine's energy sector reform, launched in March 2010. Preparation for the integration of the United Energy System of Ukraine with the ENTSO-E (European Network of Transmission System Operators for Electricity Transmission) network is ongoing. Such synchronization will allow Ukrainian electricity generating companies to export electricity to Central and Southeastern European countries in real time without interruption, operating in a single technical and regulatory mode of electricity transmission based on EU standards. The Ukrainian side is working on the project.

The next step is to consider the implementation of Ukraine's energy policy in the context of European integration. In this direction, the authors developed indicative planning in the energy sector of the economy, systematized the main elements of state regulation of key branches of the fuel and energy complex of Ukraine. The proposed model for solving this problem is presented in the Table 2.

Table 2: Modelling the Energy Efficiency System in Ukraine's Energy Policy

Directions for energy policy development	Characteristics
Promoting the vectors of Ukraine's energy policy in the context of globalization changes	Increasing the role of the State Agency for Energy Efficiency and Energy Saving in the Ukrainian society, popularizing its activities (informing about planning, implementation of specific actions aimed at improving the main vectors of development energy policy)
Policy for stimulating the reduction of energy consumption by legal entities	Installation of accounting devices for all energy resources in the country
Institutional environment for energy managers, energy auditors	Full monitoring of energy consumption in buildings (budgetary, residential and other), transport and other sectors of the economy, to propose, implement measures to reduce the level of detected inefficient energy consumption, etc.
Accumulation of funds as a result of a successful energy policy and the formation of an energy efficiency fund	Accumulation of funds earmarked for subsidies to the gas sector (in part), money allocated to the EU or other partners to improve energy efficiency, as well as funds from other sources
Renewable energy replacement policy for fossil fuels Establishing clear criteria for renewable energy levels	Setting clear criteria for the level of renewable energy
Diversification of energy resources in energy balances	Establishing clear criteria for energy efficiency, limiting the level of emissions (penalties in case of non-compliance) to be achieved by producers, transmitters and final consumers of energy resources
Improving the Energy Efficiency of Ukrainian Enterprises	To achieve these energy sector development goals, a plan to reconstruct and develop Ukraine's energy networks (electric and thermal) through the introduction of market conditions that will provide free access for all players, facilitating the creation of open and competitive energy, should be a top priority. relationships, attracting investments and improving the level of service delivery
Formation of the energy policy of cooperation between Ukraine and the EU in the context of globalisation changes	Due to the need for a large amount of work to prepare and adapt laws and regulations, Ukraine needs technical and financial assistance. In this regard, the EU supports Ukraine, in particular through an additional technical assistance project annexed to the Budget Support Program in the framework of Ukraine's energy sector reform. Preparation for the integration of the United Energy System of Ukraine with the ENTSO-E (European Network of Transmission System Operators for Electricity Transmission) network is ongoing.

Source: systematized by the authors

Research shows that the potential for energy savings in Ukraine is, first of all, in the industry (according to estimates of experts of the International Energy Agency, savings are about 30%). Only reduction of losses of transportation of electric energy in distribution networks of Ukraine (20%) will give economic, energy saving effect. Another trend is to reduce the use of primary energy sources by Ukrainian households. Research has shown that the level of energy consumption in Ukraine is much higher than it should be (especially in comparison with EU countries). The elaboration of literary sources on this issue made it possible to conditionally distinguish 4 key varieties of indicative energy planning of the country. The main difference between these varieties is the ratio between the share of state regulation and market self-regulation (Table 3).

Table 3a: Types of Indicative Planning in the Energy Sector of the Economy

Types of indicative planning	The nature of the regulatory impact on energy	Characteristics	Recommended conditions for using
1. State planning	Centralized planning of macro-energy processes.	Formation of a system of socio-economic indicators (indicators) that will characterize the state, directions of development of the energy of the country.	It is advisable to use the significant advantage of the public sector in the energy sector of the economy.
2. Formation of state energy development programs	It has advisory, informational character and includes incentives for non-state-owned energy companies.	National energy development planning of the country.	It is advisable to use it to coordinate action to mobilize energy resources to achieve national targets in the energy and national economy as a whole.
3.State indicative planning	Establishing mandatory tasks for the public energy sector. Setting the recommended values of indicators (indicators) for the non-state energy sector.	Formation of two groups of indicators (indicators): - policy (state orders, levels of prices for energy resources (products), tax rates, etc.); - economic benchmarks.	It is advisable to use the relative parity of the state / non-state energy sectors in the country.
4. Democratic planning	Formation of a mechanism for coordinating the decision-making process, coordination of development plans for all entities in the energy sector, rational allocation of limited energy resources. The indicators of this plan are indicative.	The plan is formed through multi-step iterations during the interaction of all participants in the energy sector of the country's economy.	It is advisable to use in the economic growth of the economy (including energy) of the country as a means of state regulation of energy.

Table 3b: Types of Indicative Planning in the Energy Sector of the Economy

Types of indicative planning	The nature of the regulatory impact on energy	Characteristics	Recommended conditions for using
5. Business planning of territorial innovation and investment activities	The business plan is addressed not only to potential investors and creditors, but also to the employees of the enterprise for a clearer understanding of the set tasks, as well as to the entrepreneur, seeking to carefully analyze his ideas, check their validity and realisations.	A business plan is the most important tool that allows us to evaluate both the prospects of enterprises (and, accordingly, their investment attractiveness), and the effectiveness of projects for the creation of new industries. Foreign experience of entrepreneurship development testifies to the huge role of business planning in the successful implementation of investment projects.	It is advisable to use it to attract foreign investment.

Source: systematized by the authors (Staniskova M., 2018; Lipková L. & Hovorková K., 2018; Karpenko L.– Pashko P. 2019; Frankova S., 2016; Navratil B., 2016).

In the conditions of formation of the market of energy carriers the task of the state should be to create such economic and legal bases that would promote the level of competition, take into account and harmonize the interests of all participants of the energy market, including its consumers. Therefore, the state regulatory policy in the energy sector should focus on improving the system of management (regulation) of natural monopolies (regulation of price levels, tariffs, etc.); establishment of normative, organizational bases of activity of fuel and energy complex; gradual restriction of regulation of the level of prices, tariffs for goods, services of economic entities, including monopoly entities of the energy sector, which are not natural. An active and prolonged state intervention in the energy sector can be threatening because of a long-standing, unbroken tradition based on the entire monopoly of state energy management.

The next step of the study is to analyze the energy balance of Ukraine in dynamics and to provide an estimate of electricity production for 2020-2028.

Methodological provisions on the formation of the energy balance determine the methodological approaches and basic requirements for the formation of the energy balance based on the use of European standards of energy statistics, the procedure for measuring energy indicators, and create conditions for the introduction into national practice of international terminology of energy statistics. The balance sheet methodology is based on the recommendations of the International Energy Agency (IEA) and Eurostat and other international organizations. The need for energy balances is caused by the need to obtain reliable statistics for monitoring the energy situation at both national and international levels, creating an information base for analyzing and forecasting the stable functioning of the country's economy (Hilorme T. & Karpenko L., 2018).

The state's energy balance is a system of indicators that reflects the full quantitative correspondence between the receipt and use (including losses and balances) of all energy sources in the economy as a whole or in its individual components. The energy balance

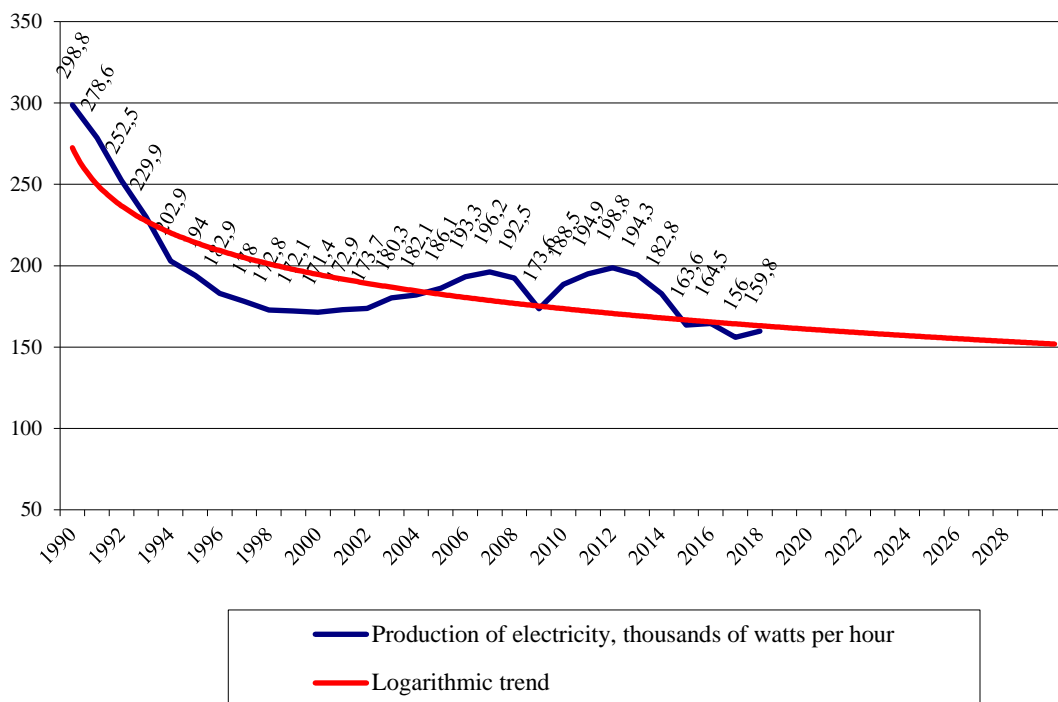
provides information support for solving a wide range of issues related to the public administration of energy consumption, using a system of accounting and reporting harmonized with international systems.

The use of the Methodological Provisions allows for a comparative analysis of energy balance indicators, its structure and volume of energy products within the framework of European statistics by types of economic activity, at cross-sectoral, national, interstate levels, determining the place of the national economy in the world fuel consumption, avoiding differences in energy estimates of modern (Karpenko L., 2019).

Stochastic relationships are investigated using correlation-regression analysis. In socio-economic forecasting, this method is used to construct contingent forecasts and forecasts based on the assessment of stable cause and effect relationships. The correlation-regression model of the relationship is a regression equation. Yes, linear regression is a function that binds the mean values of X (independent variable) and Y (dependent variable). The coefficient of determination (R^2) shows how many percent of the variation Y is due to variation X. (Karpenko L.M. & Filyppova S.V., 2016; Dziubanovska N., 2019).

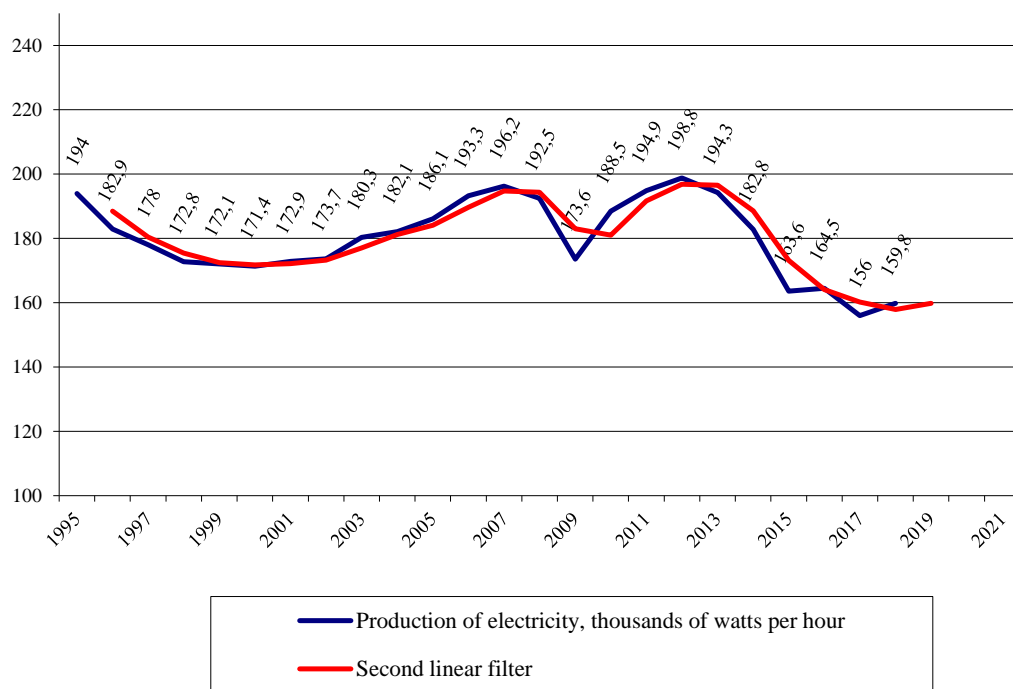
Predictions using polynomial, power, and linear forms of trend indicate a weak relationship or moderate (R^2 range from 39% to 58%). According to the logarithmic form of the trend, there is a tendency for a gradual decrease of the effective index with the average correlation between the traits ($R^2 = 69\%$). More reliable data are provided by the approximation curve - the 2nd linear filter (forecast only for two years 2019-2020, provided that the current trend of development of the indicator is maintained) – somewhat stable production (Fig. 1-2).

Figure 1: Forecasted Estimation of Electricity Production in Ukraine by the Trend Extrapolation Method for 2020-2028



Source: Authors calculation according Ukrstat (2018)

Figure 2: Predictive Validity of Ukraine's Electricity Production by 2020 Trend Extrapolation Method



Source: Authors calculation according Ukrstat (2018)

In general, the construction of different forms of trend, selection, analysis of current and predictive validity showed a tendency to decrease the production of own electricity, unfortunately, not happy prospects. Therefore, Ukraine's innovative energy policy in the context of European integration and the globalization of change is needed.

4. Conclusion

Ukraine is, and in the long run, striving to remain one of the largest continental European producers of hydrocarbons and reliable transit of energy (primarily natural gas and oil), ensuring a secure and reliable supply of energy to its own consumers and consumers in the adjacent markets, which must be extracted and extracted level of environmental and social responsibility, with efforts to comply with greenhouse gas emission reduction commitments.

"Energy Strategy of Ukraine for 2035" Security, Energy Efficiency, Competitiveness "envisages that by 2025 the reform of Ukraine's energy complex will be largely completed, priority targets for safety and energy efficiency will be achieved, and its innovative renewal and integration with the EU will be secured.

The implementation of the tasks of the ESU after 2025 will require several other approaches to energy regulation based on the basic principles adapted by EU countries, to the development of strategic planning documents and practical activities for the implementation of public policy in the energy sector.

The dynamics of economic development will depend mainly on the implementation of economic reforms, through which the "rules of the game" in the energy market will become transparent and non-discriminatory, as well as on the implementation of European legislation, including in the energy sphere, and terms of integration with the energy market in Europe.

A key quantitative and qualitative characteristic of the ESU is the structure of the Common Primary Energy Supply (CPES). Economic and mathematical models, generalized expert assessments, as well as indicative indicators that Ukraine should achieve in accordance with its international commitments in the area of Renewable Energy Sources (RES) and climate change were used to shape the structure of the RES.

The extension of European energy standards to Ukrainian legislation is able to significantly increase Ukraine's resistance to attempts to politicize interstate relations in the energy sector, while joining the pan-European market is to liberalize and de-monopolize internal energy markets, to make them more transparent and competitive. Transformation and market integration is only possible if one of the main players becomes a consumer, as required by Objective 7 of the United Nations Programmatic Comprehensive Resolution 2015 on the 2030 Agenda for Sustainable Development.

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Building a Green Europe. Ten Years of the Declaration on Green Growth

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Abstract

Building a climate-neutral, green, fair and social Europe is one of the main priorities of the EU Strategic Agenda for 2019-2024. This document draws attention to the need to intensify efforts for a sustainable transformation of Europe. In 2009, OECD member countries adopted the Green Growth Declaration, which emphasized that it is possible to shape economic growth by investing in environmentally friendly solutions, which in turn will contribute increasing the efficiency of manufacturing processes. Ten years after, this paper try to answer the following questions: What progress was achieved in implementing the assumptions of the green growth concept in 21 EU countries that signed the declaration? What are the main challenges in achieving green growth in Europe? Research was carried out based on the taxonomic linear ordering method, which enabled multidimensional comparative analysis (MCA). The adopted method made it possible to evaluate the studied phenomenon as a whole, providing grounds for assigning the selected countries into four groups, characterized by a similar level of green growth.

Keywords: climate, environment, green growth, Strategic Agenda 2019-2024, sustainable development, taxonomic methods

JEL Classification: O44, O57, Q56

1. Introduction

In the time of climate crisis, the processes of European integration in environmental policy are of particular importance. These issues increasingly determine strategies and programs for the development of enterprises, regions, countries and supranational structures. One of the main priorities of the EU Strategic Agenda for 2019-2024 is building a climate-neutral, green, fair and social Europe. This document draws attention to the need to intensify efforts for a sustainable transformation of Europe (European Council, 2019).

In turn, the European Commission published the European Green Deal (European Commission, 2019). It is a growth strategy *that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. It also aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts.*

The fashion for "greening" socio-economic processes continues, which is measurable with the emerging new concepts that in their nomenclature use an adjective that is now extremely popular – 'green'. The most widely used and thus the most recognizable terms today are: green growth (Huhtanen, 2010; OECD, 2011; Kasztelan, 2015), green economy (Barbier, 2011;

Speck and Zoboli, 2017), green competitiveness (Kasztelan, 2018), green innovation (Song and Yu, 2018), green jobs (Rutkowska-Podolowska et al., 2016; Sulich and Zema, 2018), green marketing (McDaniel and Rylander, 1993; FuiYeng and Yazdanifard 2015), and green finance (Sharif and Kaushak 2018).

Recently, more and more often the term 'green integration' is used when referring to environmental processes of European integration (Grudziński and Sulich, 2018). Today's EU environmental policy is based on two basic concepts: sustainable development and green growth, and as shown by numerous scientific analyses, both concepts are not in contradiction to each other; in fact, they are complementary (Barbier, 2011; European Commission, 2012; Kasztelan, 2017).

In 2009, OECD member countries adopted the Green Growth Declaration (2009), which emphasized that it is possible to shape economic growth by investing in environmentally friendly solutions, which in turn will contribute to increasing the efficiency of manufacturing processes. Europe needs to strengthen the synergies between smart and green growth to meet climate change, environmental and energy challenges as well as growing resource scarcity.

Ten years later, the aim of this paper is to evaluate the advancement of green growth in 21 EU member states – signatories of the Declaration. The studies attempt to fill the information gap by constructing a synthetic measure based on the taxonomic linear ordering method, which enabled multidimensional comparative analysis (MCA). This type of analysis provides answers to the following questions: (1) What progress was achieved in implementing the assumptions of the green growth concept in 21 EU countries? (2) What are the main problems on the way towards green growth in Europe?

2. Problem Formulation and Methodology

The evaluation of green growth in 21 EU countries (signatory states) was based on a taxonomic linear ordering method, which is based on the construction of a synthetic measure of the studied phenomenon (Hellwig, 1968). An aggregate measure was built based on the median and standard deviation. Taxonomic procedures are used in the study of complex phenomena that cannot be measured directly. This kind of analysis provides an estimate of the level of diversity of objects (e.g. countries) described by a set of statistical characteristics (e.g. indicators). In a linear hierarchy the maximum degree is 1 (Łogwiniuk, 2011).

At the first stage of the study procedure, the indicators were initially selected. The reference year 2009 and the last available year were chosen due to data availability in OECD database. Diagnostic variables defining the level of greening the growth for particular countries were adjusted in an attempt to meet two criteria: substantive and formal. The selection of substantive indicators was based on OECD studies (2014; 2017), as well as on a review of the database. The next step was to check compliance with formal criteria, i.e. whether they were measurable, complete and ensured comparability. Ultimately, 70 out of 114 diagnostic variables were selected for the green growth analysis (Table 2).

Among the selected variables, 34 were considered to be larger-the-better characteristics (stimulants) having a positive influence on the measure, whereas 36 were regarded as smaller-the-better characteristics (de-stimulants) reducing the synthetic measure of green growth. Stimulants (selected indicators) are explanatory (independent) variables whose increased values cause an increase in the value of the dependent variable (green growth), while de-stimulants are explanatory variables whose increased values induce a decrease in the value of the dependent variable. The values of variables (X_j , $j=1,2,...,m$) representing respective

countries (O_i , $i=1,2,\dots,n$) are presented as a matrix of observations (1) in the following form (Grzebyk & Stec, 2015):

$$X = \begin{bmatrix} x_{11} & \cdots & x_{1m} \\ \vdots & \ddots & \vdots \\ x_{n1} & \cdots & x_{nm} \end{bmatrix} \quad (1)$$

Table 1: Indicators of Green Growth

Indicator groups	Examples of indicators used in analysis
Environmental and resource productivity	Production-based CO2 productivity, GDP per unit of energy-related CO2 emissions
	Production-based CO2 intensity, energy-related CO2 per capita
	Production-based CO2 emissions, index 2000=100
	Energy productivity, GDP per unit of TPES
	Energy intensity, TPES per capita
	Renewable energy supply, % TPES
	Biomass, % of DMC
	Municipal waste generated, kg per capita
	Adjustment for pollution abatement
Natural asset base	Forests under sustainable management certification, % total forest area
Environmental dimension of quality of life	Mean population exposure to PM2.5
	Percentage of population exposed to more than 10 micrograms/m3
	Population with access to improved drinking water sources, % total population
	Population with access to improved sanitation, % total population
Economic opportunities and policy responses	Development of environment-related technologies, % all technologies
	Environmentally related government R&D budget, % total government R&D
	Environmentally related taxes, % total tax revenue
	Mean feed-in tariff for solar PV electricity generation
	Mean feed-in tariff for wind electricity generation
	Fossil fuel consumption support, % energy related tax revenue
	Total fossil fuel support, % of total tax revenue
Socio-economic context	Real GDP per capita
	Population density, inhabitants per km2
	Labour tax revenue, % total tax revenue

Source: own elaboration based on OECD database.

Since the set of independent features contains variables that cannot be aggregated directly using appropriate standardization, normalization formulas (2) and (3) were applied. Among the formulas, the method of zero unitarization was selected based on the interval of a normalized variable. The first mention of this method can be found in the works of Wesołowski (1971), Kolman (1973), and Borys (1978). Indicators selected for testing the green growth in EU countries have been subjected to a standardization process based on the following formulas (Kukuła, 1999, 2000; Kijek, 2013):

- For stimulants:

$$X = \frac{x_{ij} - \min(x_{ij})_i}{\max(x_{ij})_i - \min(x_{ij})_i} \quad (2)$$

– For de-stimulants:

$$X = \frac{\max(x_{ij})_i - x_{ij}}{\max(x_{ij})_i - \min(x_{ij})_i} \quad (3)$$

where:

z_{ij} is the normalized value of the j -th variable in the i -th country

x_{ij} is the initial value of the j -th variable in the i -th country.

Diagnostic features normalized in the above-mentioned way take the value from the interval [0; 1]. The closer the value to one, the better the situation in terms of the investigated feature, and the closer the value to zero, the worse the situation.

In the next step, the normalized values of variables formed the basis for calculating the median (formulas (4) and (5)) and standard deviation (6) for each of the countries. Median values were determined using the formula (Strahl, 2006; Grzebyk & Stec, 2015):

$$Me_i = \frac{z_{(\frac{m}{2})i} + z_{(\frac{m}{2}+1)i}}{2} \quad (4)$$

for an even number of observations, or:

$$Me_i = z_{(\frac{m}{2}+1)i} \quad (5)$$

for an odd number of observations,

where: $z_{i(j)}$ is the j -th statistical ordinal for the vector $(z_{i1}, z_{i2}, \dots, z_{im})$, $i = 1, 2, \dots, n$; $j = 1, 2, \dots, m$.

In turn, standard deviation was calculated according to the following formula:

$$Se_i = \sqrt{\frac{1}{m} \sum_{j=1}^m (z_{ij} - \bar{z})^2} \quad (6)$$

Based on the median and standard deviation, an aggregate measure of green growth was developed for each country (7):

$$w_i = Me_i(1 - Se_i) \quad w_i < 1 \quad (7)$$

Values of the measure closer to one indicate a higher level of greening of the specific member state, resulting in a higher rank. The aggregate measure prefers countries with a higher median of features describing the specific country and with a smaller differentiation between the values of features in the specific country expressed as standard deviation.

The selected procedure for evaluating green growth provided multidimensional comparative analysis. It allowed a comparison between member states of the EU, providing grounds for classifying them into uniform groups:

group I:	$w_i \geq \bar{w} + S$	high level
group II:	$\bar{w} + S > w_i \geq \bar{w}$	medium-high level

group III:	$\bar{w} > w_i \geq \bar{w} - S$	medium-low level
group IV:	$w_i < \bar{w} - S$	low level

where: \bar{w} is the mean value of the synthetic measure and S is the standard deviation of the synthetic measure.

According to the w_i values the EU countries were assigned to one of the groups with regard to their level of greening the growth.

3. Results

Research results show that in 2009 four countries were classified into the group with the highest green growth rating, while according to the latest data only two countries were in group I. Compared to 2009, there was an increase in the number of countries in group II (medium-high) and in group IV, characterized by the lowest level of implementation of green growth assumptions. However, the quantitative status in group III (medium-low) did not change. At the same time, it should be noted that there was a reshuffling of individual countries between groups during the period considered.

Table 2: Classification of 21 EU Member States according to the Value of the Synthetic Measure describing the Level of Green Growth

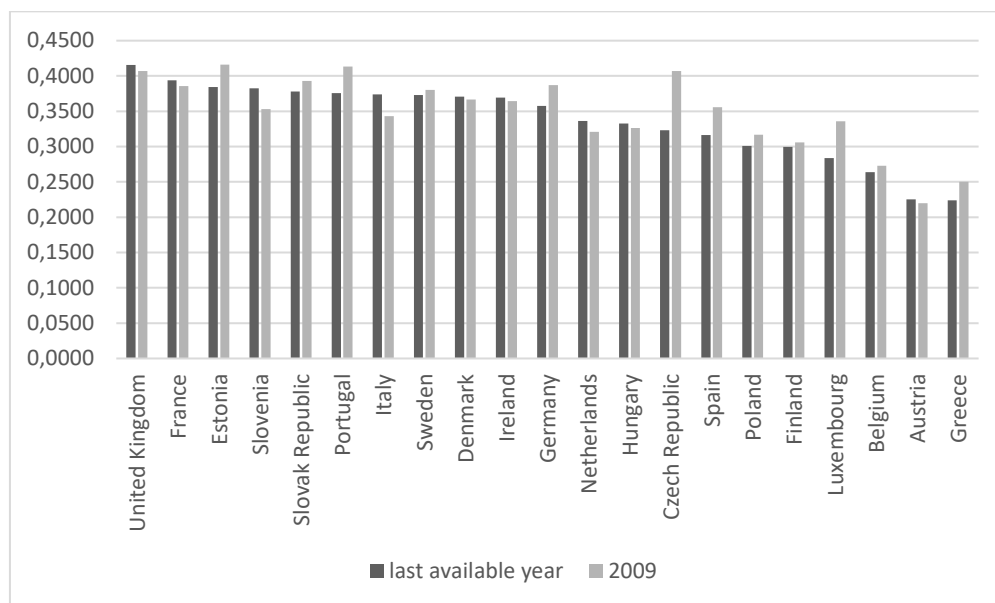
Group number	Green growth level	2009		last available data	
		The number of countries in the group	Countries (w_i order)	The number of countries in the group	Countries (w_i order)
I	high	4	Estonia, Portugal, UK, Czech Rep.	2	UK, France
II	medium-high	8	Slovak Rep., Germany, France, Sweden, Denmark, Ireland, Spain, Slovenia	9	Estonia, Slovenia, Slovak Rep., Portugal, Italy, Sweden, Denmark, Ireland, Germany
III	medium-low	6	Italy, Luxembourg, Hungary, Netherlands, Poland, Finland	6	Netherlands, Hungary, Czech Rep., Spain, Poland, Finland
IV	low	3	Belgium, Greece, Austria	4	Luxembourg, Belgium, Austria, Greece

Source: own calculations and elaboration

Among the 21 analysed countries, an improvement in the assessment of the degree of greening of socio-economic processes, and thus advancement between individual groups was observed for France (from group II to group I) and Italy (from group II to group III). On the other hand, the situation deteriorated in the Czech Republic (downgrade from group I to group III), as well as in Estonia and Portugal (downgrade to group II), Spain (from group II to group III) and Luxembourg (from group III to IV).

The conducted analysis shows that in 2009 Estonia was characterized by the highest level of 'greening' growth. The taxonomic metric of this country was estimated at 0.4159. The lowest evaluation of the studied phenomenon among all 21 member states was noted in Austria for which w_i indicator amounted to a mere 0.2201. For comparison, according to the latest available data, the United Kingdom achieved the best result (0.4157), while Greece was the worst in the assessment (0.2241). It is worth noting that none of the examined countries recorded at least an average level (0.5000) of a synthetic green growth meter. The average value of the synthetic measure for all member states covered by the analysis was 0.3486 in 2009 and 0.3372 taking into account the latest data.

Figure 1: Changes in the Synthetic Measure of Green Growth in 21 EU Countries



Source: own elaboration.

A deeper analysis of green growth factors for 21 EU countries makes it possible to state that the average standardized mean values were exceeded for 34 of them (48.6%). In addition, in the year examined an improvement was observed for 34 indicators. However, still significant problems to be solved are:

- low level of development of environment-related technologies (average w_i for 21 countries – 0.1093);
- low share of renewable energy supply in total primary energy supply (TPES) (0.1222) and renewable electricity in total electricity generation (0.3091);

- introduction of the appropriate mean feed-in tariff for solar PV (0.1612) and for wind (0.2843) electricity generation;
- gradual reduction of fossil fuel consumption support (0,2199);
- low levels of energy productivity (0.2878) and non-energy material productivity (0.2888) indicators as well as production-based CO2 productivity (0.3160);
- gradual increase in environmentally related government R&D budgets (0.3349).

The indicated areas require special attention because, due to the current neglect or omission in this regard, the overall assessment of the level of greening of socio-economic processes in EU countries is low. A separate analysis of each indicator for respective countries provides information on the strengths and weaknesses of the degree of greening the growth, while synthetic measures allow comparing and categorizing respective countries as well as performing an overall assessment of green growth in the European Union.

The synthetic evaluation of green growth is an improvement of the OECD method. The proposed method uses a comprehensive list of OECD indicators but advances the OECD approach by adding evaluation metrics to assess the performance of each country relative to other jurisdictions by indicator and by synthetic measure. This allows the countries to clearly identify areas where their performance is weak and to prioritize their mitigation measures accordingly (Kasztelan et al., 2019).

4. Conclusion

One of the main priorities of the new EU Strategic Agenda 2019-2024 is building a climate-neutral, green, fair and social Europe. In 2009, twenty one EU countries signed a declaration for green growth, a concept that was to contribute to the transformation of traditionally understood paths of socio-economic growth. The article presents the results of the research that provide answers to two key questions: Is there progress in implementing the assumptions of the green growth concept ten years after signing the declaration? What are the main problems on the way towards green growth in Europe?

Based on the methods used, synthetic green growth measures were constructed for each of the countries studied. The use of the taxonomic linear ordering method allowed assigning respective EU countries to one of four classes identified based on their green growth level. The conclusions from the study are as follows:

1. The average value of the synthetic measure for all 21 countries covered by the analysis was 0.3486 in 2009 and 0.3372 taking into account the latest data, which testifies to a very low general level of green growth in the EU member states.
2. There was a slight decrease in the average synthetic measure over the period, which means that the overall greening rate for socio-economic growth in the countries analysed deteriorated.
3. A decrease was observed in the number of countries with the highest green growth rating (group I), while increasing the number of countries in the lowest rating group (I). Only France and Italy recorded an improvement in their green growth rating, while as many as five countries (Czech Republic, Estonia, Portugal, Spain and Luxembourg) reported worse results in this respect.
4. The results of a thorough analysis of green growth factors show that much still remains to be done in the greening of economic processes in EU countries.

The obtained results support the usefulness of synthetic metrics for evaluating the level of green growth at the national level. It should be stressed, however, that the research was based

on 70 out of 114 indicators included in the OECD database. Therefore, a significant information gap exists with regard to specific indicators as well as the number of countries, which in turn would lead to more comprehensive evaluation of green growth. Future research could therefore focus on filling the existing information gap.

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The Role of Public Entities in Financing Environmental Protection Expenditure in EU Countries

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Abstract

The EU membership obliges member states to adapt to the standards of the Community among which a key role plays the sustainable development. The foundation of the concept is a development that respects natural environment. Due to its specificity environmental protection is not among key interests for the private sector hence the public sector plays an important role in that field. It stimulates the development and provides appropriate quality of public services at socially acceptable prices with respect to natural environment. On one hand, public entities establish policies and regulations and attend in implementing of national and subnational environmental policy, while on the other hand, they finance environmental protection themselves or they use other options like initiating cross-sectoral cooperation (e.g. public-private partnership). The purpose of the article is to outline the role of public sector in the field of environmental protection and to present the level and structure of public expenditure on environmental protection in EU countries. The research was based on descriptive and comparative analysis methods. For this purpose Eurostat data was used.

Keywords: environment, environmental protection, environmental protection expenditure, local government, public sector

JEL Classification: F36, H40, H76, O57, Q56

1. Introduction

At the beginning of the 1970s, a report of the Club of Rome *Mankind at the Turning Point* was published, which drew international attention to the threats posed by industrialisation and population expansion as well as suggested quite radical political moves to reduce human impact on the environment and to reconcile economic interests with allegedly conflicting ecological ones, taking into account the desire to level out economic and social differences between states (Leśniewski, 2013; Livermore, 2013). It laid the foundations for the creation of the concept of sustainable development, which first official definition was formulated in 1987 in the report *Our Common Future* (known as the Brundtland Report). According to it sustainable development is “the development that meets the needs of the present without comprising the ability of future generations to meet their own needs” (WCED, 1987). In 1992 the Rio de Janeiro Conference, referred to as the Earth Summit, approved the so-called Rio Declaration - Agenda 21 (Environmental Literacy Council, 2007). Since then, sustainable development remains the guiding principle of the policies and strategies of countries around the world (Hill and Crabtree, 2003; Drastichová, 2016).

The representatives of the countries participating in the Rio Summit noted that the participation and cooperation of local authorities, in particular, will be a decisive factor in achieving the

objectives and targets of Agenda 21. It was stressed that “...local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilising and responding to the public to promote sustainable development” (United Nations, 1992).

In the same year, the European Community developed The European 5th Environmental Programme *Towards Sustainability* under which sustainable development has become a central principle of all European policies. This goal was also confirmed by the guidelines governing the Structural Funds, where much greater emphasis was placed on environmental protection (Hill and Crabtree, 2003). As a result many sectorial directives and strategies, such as Europa 2020, were set under which member states had to align their environmental policies and make efforts towards sustainable use of the environment (Ercolano and Romano, 2018).

The government sector has been given a unique role in the implementation of The 5th Environmental Program provisions, and not only because of its legislative powers. It was emphasised that the government sector plans and creates conditions for economic development, takes care of access to information, education and is responsible for land use management. In most Member States, public authorities also act as public enterprises and are thus responsible for providing public goods and services to citizens, which is inextricably linked to several expenses. In the context of environmental protection, the importance of the activities of local and regional authorities, responsible among other things for industrial pollution control, waste management, development of infrastructure, including environmental infrastructure, has been underlined (European Commission, 1992).

According to Harrington and Hsu (2018), the government sector, especially at state and local level, plays a vital role in taking care of the environment, which is manifested in particular in its role as an initiator of environmental protection activities (under the applicable laws and with appropriate political support), coordinator (among other things, filling the information gap through access to so-called best practices and participating in the measurement of the effectiveness of actions taken) and capacity-builder supporting cooperation and partnership. Żylicz (2014) emphasises that the public sector and in particular the local government seems to be a natural leader, whose two main tasks are to improve the standard of living of the local community and to manage local resources in such a way as to ensure access to them also for future generations.

Government intervention in environmental protection is necessary to maximise overall economic prosperity in the face of the failure of a market mechanism that is unable to provide sufficient levels of environmental goods and services (Bateman et al., 1993). It happens for several reasons.

Firstly, the environment and its resources are treated as public goods (Żylicz, 2014), that have two essential characteristics: non-excludability and non-rivalrous. This means that if there is a particular resource of a good, e.g. clean air, beautiful landscape (or a certain amount of the good has been delivered), nobody can be excluded from its consumption. Moreover, the consumption of this good by many users at the same time does not cause a loss of its utility value (Bateman et al., 1993). This approach has been appropriate as long as the consumption of natural resources has been low, but as socio-economic progress has been made it has become clear that natural regeneration processes are not sufficient to maintain ecological balance and environmental goods are subject to competition for use. However, this situation is not reflected in the price, which naturally leads to excessive demand or misallocation of the market (Rogall, 2010).

Another manifestation of market failure is the occurrence of both positive and negative externalities. The activities giving positive external effects related to environmental protection are, among others, afforestation programs, carbon dioxide emission neutralization programs, investments in the landscape, water, soil protection or environmental education (Eidelwein et al., 2018). However, there is a discrepancy between the entities which finance the above activities, usually local communities, and the entities which benefit from such activities. The reason for this is that they are felt not only at the local level, but also at the national and even global scale, and not only by the present generations, but will also influence future generations (Raymajhee and Joshi, 2018). Since the interests of the individuals are preferred to those of the general interest, especially if the effects of the undertaken actions are not immediately visible, such measures would not be taken without the intervention of public entities.

On the other hand, there are negative externalities such as greenhouse gases, air pollution, excessive soil and water consumption, groundwater pollution and solid waste production. The consequences of the above are not only borne by those responsible for their occurrence. Therefore, public authorities need to intervene to solve these (environmental) problems by internalizing environmental costs in the prices offered by those generating negative externalities to cover the costs of pollution prevention, waste treatment and recovery related to the use of natural capital (the Pigouvian tax concept) (Eidelwein et al., 2018; Zhang and Zhao, 2018).

Another reason for public sector interference in environmental protection is that access to certain environmental goods or services by all members of a given community is considered to be socially just, and due to their public nature no one should in principle be excluded from consumption. The consequence of such an approach is the occurrence of the phenomenon of "free-riding". People tend to put their own interests before the general good, which leads to avoiding certain costs (e.g. related to environmental protection) in the hope that someone else will pay for them. The role of the public sector is, therefore, to take care to limit this type of behaviour (Rogall, 2010; Grant and Langpap, 2019).

2. Problem Formulation, Data and Methodology

The aim of the study is to evaluate the government environmental protection (EP) expenditure in the European Union countries. It seems relevant to fill the information gap in that respect since most studies focus on analysis of national EP expenditure without further investigation of institutional sectors' EP expenditure. Research was carried out based on the descriptive and comparative analysis methods. For this purpose, Eurostat data for the years 2007-2018 was used. All European Union Member States were selected for research. In order to avoid misunderstandings a few clarifications are required.

According to The European System of Accounts (ESA 2010) government sector, also referred to as the public sector in literature and numerous policy documents, and its sub-sectors are defined as government units which are "*legal entities established by a political process which have legislative, judicial or executive authority over other institutional units within a given area. Their principal function is to provide goods and services to the community and households on a non-market basis and to redistribute income and wealth. Its sub-sectors are central government, state government, local government and social security funds*" (ESA 2010). In most EU countries, the government sector is divided into three sub-sectors: central government, local government and social security funds. The exceptions are countries such as Austria, Belgium, Spain and Germany, where the state government level also functions.

Environmental protection (EP) expenditure is important factor for the development of an effective environmental policy meeting sustainable development goals. According to Basoglu and Uzar (2019) EP expenditure is all spending to eliminate the environmental damages and to enhance environmental quality. It can be also understood as economic source to be allocated for all the activities and measures which are aimed at the prevention, reduction and elimination of pollution or other form of the environmental degradation (Bobáková and Michalíková, 2019). EP expenditure is a sum of investment expenditure and running expenditure on activities related to environmental protection (Kierepka-Kasztelan, 2018).

Public entities incur several expenditures on environmental protection activities to achieve environmental objectives on both local and global scales. To enhance pollution abatement, government expenditure can be reallocated according to the needs and is perceived as the main factor determining good environmental quality (Zhang et al., 2019). They have been classified as a standard ranking the objectives of government activities in the form of the Classification of the Functions of Government (COFOG, 2019), replicated in ESA2010. According to this classification, the public sector's EP expenditure has been grouped into six categories:

- Waste management expenditure, which covers collection, treatment and disposal of waste,
- Wastewater management expenditure, which includes sewage system operation and wastewater treatment,
- Pollution abatement expenditure – all expenses relating to the protection of air, climate, groundwater and soil, as well as noise and vibration reduction and protection against ionising radiation,
- Protection of biodiversity and landscape expenditure – relating to the protection of species of flora and fauna, the protection of habitats and the aesthetic qualities of landscapes,
- R&D environmental protection expenditure – any investment involving wide-ranging research and applied research aimed at the practical objectives of producing new or significantly improving existing technologies, processes, materials, products, services,
- Environmental protection not classified elsewhere (n.e.c.).

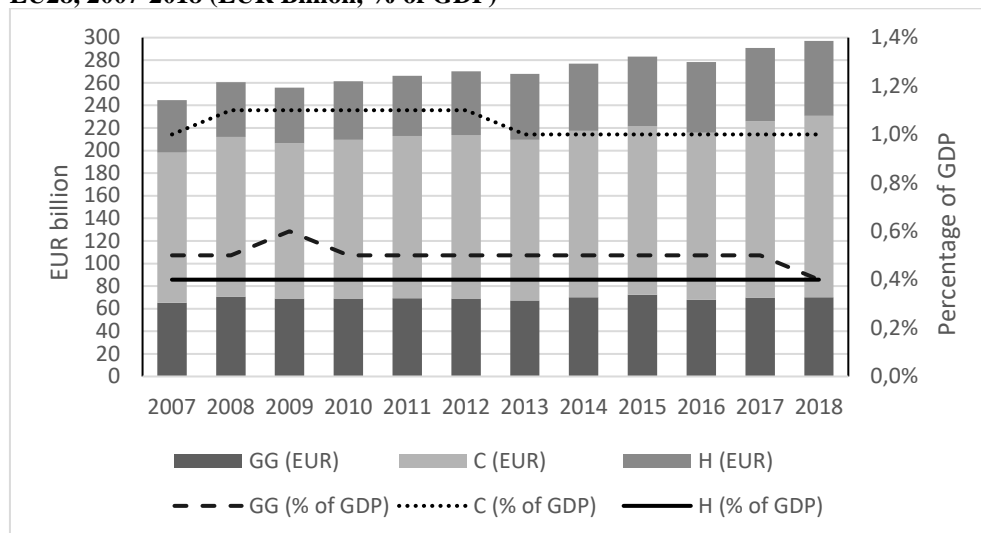
The specific objectives of the paper are: to show government EP expenditure significance in the total environmental protection expenditure of countries together with its share in the GDP, to present the level and dynamics of changes in government expenditure on environmental protection, to distinguish countries in terms of the level of government EP expenditure per inhabitant, to determine the variation in government EP expenditure in the EU countries and to indicate the importance of subsectors in government EP expenditure.

3. Research Findings

EP expenditure of 28 EU countries globally increased from 244,8 EUR billion to over 297 EUR billion and accounted for about 2% of GDP in the analysed period. Among the EU countries, significant differences can be observed in this respect. So the lowest share of national EP expenditure in GDP was found in Ireland in 2015 - 2016 - 0.5% and Luxembourg, where it did not exceed 0.9% over the whole analysed period. On the other hand, countries such as Austria and Belgium exceeded 3% of GDP, reaching a record level of 3.4% of GDP in 2014 in Belgium.

General government EP expenditure increased for about 7,5% during the analysed period, from the level of EUR 65 billion in 2007 to slightly above EUR 70 billion in 2018. In 2007-2018 the share of government EP expenditure in GDP remained stable (0,5% of GDP) with a slight increase in 2009 (Figure 1).

Figure 1: National Expenditure on Environmental Protection by Institutional Sector, EU28, 2007-2018 (EUR Billion, % of GDP)

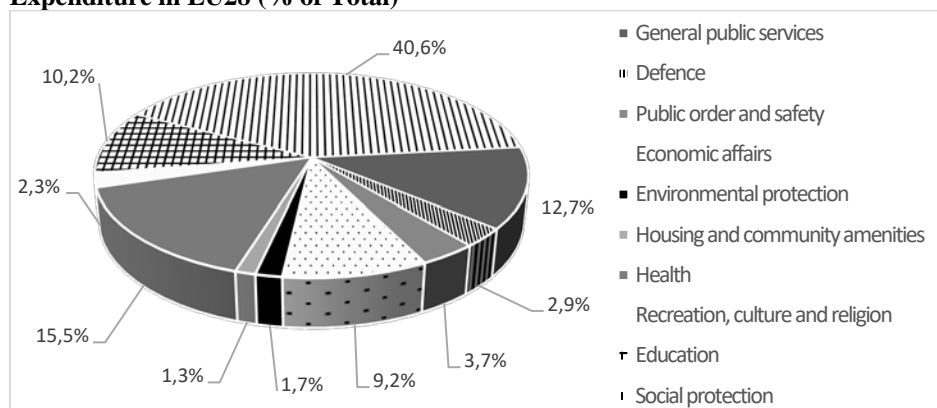


GG - General Government, C – Corporations, H – Households.

Source: own elaboration based on Eurostat data (Eurostat, 2020)

It is also essential to determine the place occupied by government EP expenditure in the overall expenditure of this sector. For the Union as a whole, this contribution was around 1.7%. It does not seem to be much but it should be noted that environmental protection, although very important for implementing the assumptions of the concept of sustainable development, is only one of many areas for which the government sector is responsible (Figure 2). The highest shares of EP expenditure in overall expenditure of general government were observed in Malta and Netherlands (3.4% and 3.3% respectively) whilst in Finland and Cyprus it did not even exceed 0.6%. Worth mentioning is that in most EU countries the share of government expenditure on different areas remained relatively constant throughout the analysed period.

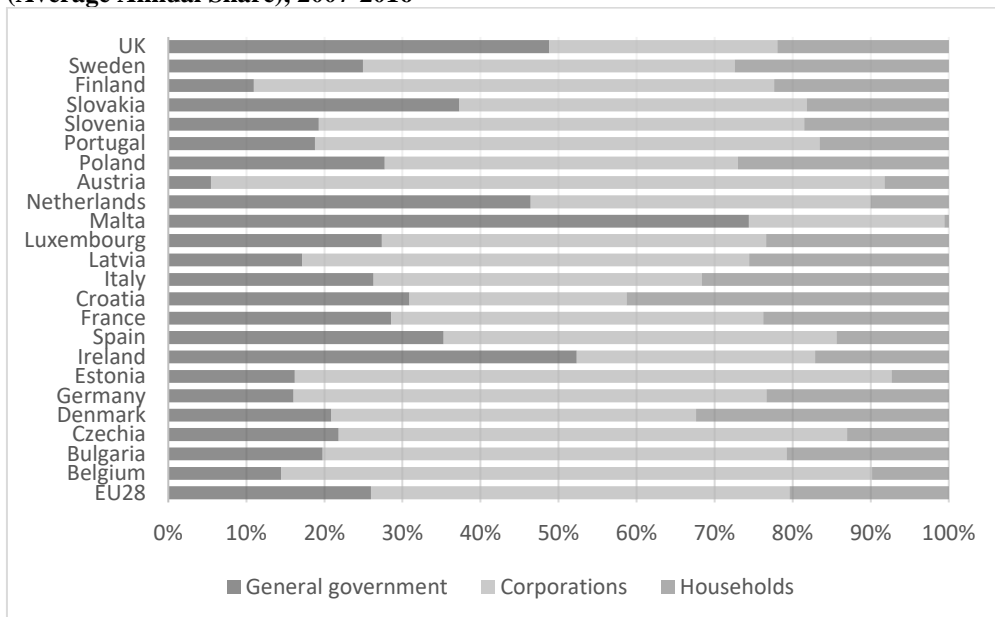
Figure 2: Share of Expenditure on Different Public Concerns in General Government Expenditure in EU28 (% of Total)



Source: own elaboration based on Eurostat data (Eurostat, 2020)

The average share of the public sector in financing environmental activities in the EU countries was 26% in the years 2007-2016. The largest share of the public sector in national EP expenditure, reaching almost 50%, was observed in countries such as Great Britain, the Netherlands and Ireland. The absolute leader in this respect was Malta, where the average annual share of public sector in EP expenditure was 74.4%. To compare, the lowest average shares, not exceeding 15%, were shown by countries such as Austria (5.5%), Finland (10.9%) or Belgium (14.4%) (Figure 3).

Figure 3: National Expenditure on Environmental Protection by Institutional Sector (Average Annual Share), 2007-2016



Source: author's own calculations and elaboration based on Eurostat data (Eurostat, 2020)

Table 1: Classification of 28 EU Countries According to the Average Level of Government Environmental Protection Expenditure per Inhabitant in 2007-2018

Group	The number of countries in the group	EUR per inhabitant	EU Countries
I	10	(0-100>	Bulgaria, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Poland, Romania, Finland
II	8	(100-200>	Czech Republic, Denmark, Germany, Austria, Portugal, Slovenia, Slovakia, Sweden
III	6	(200-300>	Ireland, Greece, Spain, Italy, Malta, United Kingdom
IV	4	(300-	Belgium, France, Luxemburg, Netherlands

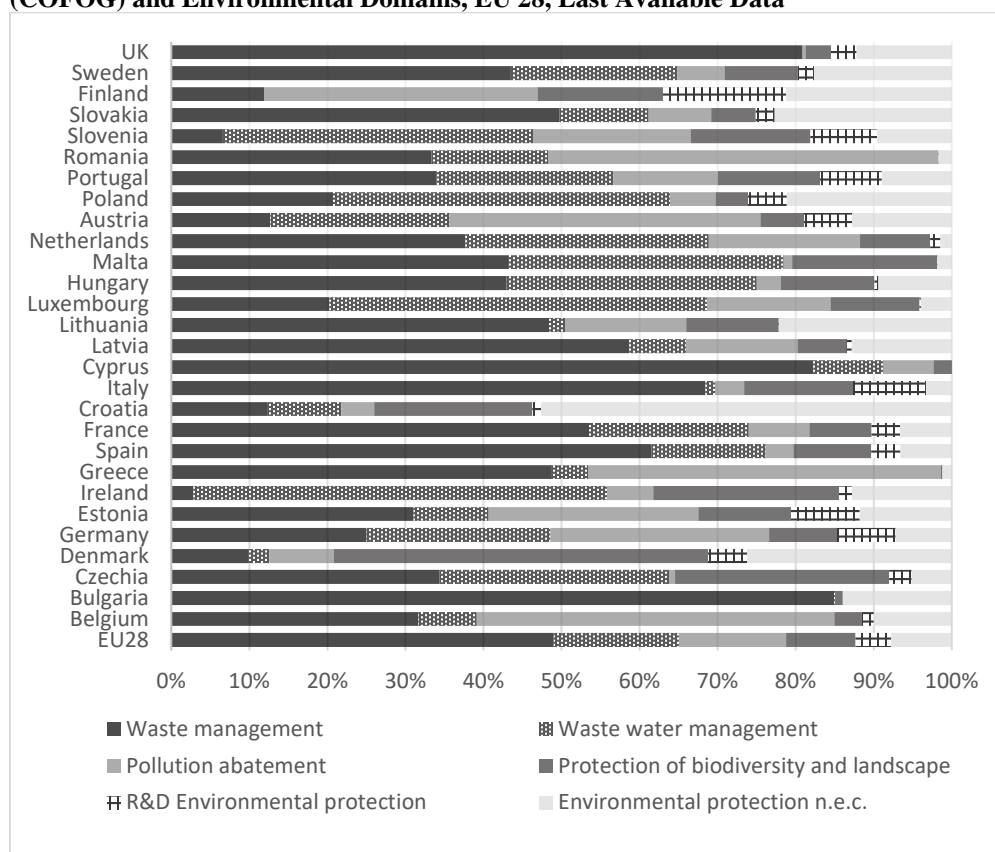
Source: author's own calculation and elaboration based on Eurostat data (Eurostat, 2020)

In the respect of government EP expenditure per capita there was a clear division between the countries of Central and Eastern Europe, where in most countries it did not exceed 100 EUR

per inhabitant (Table 1), and more affluent Western European countries with much higher values, often exceeding the EU average (221.4 EUR per inhabitant). The most impressive level of government EP expenditure per inhabitant, in the whole analysed period, was observed in 2009 in Luxembourg and it amounted to more than 963 EUR.

For the whole Union, government EP expenditure per capita increased from 204 EUR in 2007 to 238 EUR in 2018, with the highest growth rates (2018 in relation to 2007) being observed in Romania (244%), Belgium (95%), Slovakia (70%) and Germany (55%). In nine countries, such as Denmark, Ireland, Spain, Latvia, Lithuania, Hungary, Slovenia, Finland and United Kingdom, a decline in government EP expenditure was observed with the highest rates of decline amounted to 45% in Ireland and 35% in Lithuania. In other countries, government EP expenditure per inhabitant remained relatively stable in the analysed period.

Figure 4: General Government Environmental Protection Expenditure by Function (COFOG) and Environmental Domains, EU 28, Last Available Data



Source: author's own calculation and elaboration based on Eurostat data (Eurostat, 2020)

Government spending on environmental protection in the 28 EU countries focused primarily on financing waste management (almost 50%), followed by wastewater treatment (16%) and combating air pollution (14%). To a lesser extent, government EP expenditure focused on other areas: protection of biodiversity and landscape (9%), Environmental protection n.e.c. (8%) and R&D environmental protection (5%) (Figure 4). In the analysed period the most

significant increase of about 70% was noted in the field of pollution abatement which was the result of the fact that climate change objectives were becoming increasingly important.

The structure of government EP expenditure among individual EU countries differed from the EU average, mainly since individual Member States faced different environmental problems. Public sector EP expenditure in most countries focused on waste management but in Ireland, Luxemburg, Poland and Slovenia the main concern was waste water management (53%, 48%, 43% and 40% respectively). Pollution abatement was the main field of interest in Romania (50%), Greece (45%), Belgium (46%) and Austria (40%) whilst Denmark primarily focused on protection of biodiversity and landscape (48%).

In the Union as a whole the predominant subsector was local government. Its EP expenditure amounted to EUR 73 billion in 2007 and increased for about EUR 13,3 billion until 2018, which accounted for almost 70% of overall public spending on environmental protection. State government is present in 4 European countries, among which only in Belgium it played significant role with its share exceeding 50%. Central government EP expenditure were vital in Malta, and Latvia. Whilst social security funds are totally invisible in financing environmental activities in the analysed period.

4. Conclusion

Public entities of EU countries incur much expenses for environmental protection, which is directly related to the need of ensuring access to environmental public goods and services and to address market failures associated with the existence of environmental externalities. Due to the specificity of this area, the private sector is not voluntarily interested in environmental protection. It needs strict legal regulations and many incentives to incur the expenditures on this goal.

One of the objectives of the European Union is to encourage ecosystem users to take protective decisions that take into account the environmental costs of their behaviour following the 'polluter pays' principle. During the whole 2007-2018 period the share of public sector in expenditure on environment protection remained relatively stable what confirms its unabated role in this respect, although it was subject to large variances within respective Member State.

It seems obvious that preventing progressive degradation of natural environment requires further intensification of environmental activities and increase in EP expenditure in all EU countries. Public expenditure appears to be a guarantee for achieving the European Union's environmental policy goals of sustainable development, based on a low-carbon and resource-efficient economy, adapted to the challenges of continuous climate change. Having limited financial abilities resulting from numerous public tasks, public entities are not able to meet those objectives on their own and other sectors involvement is required. Government sector should use its authority to establish policies and regulations encouraging other sectors to intensify their actions for environment protection. One of the best solutions would be creating a climate of cooperation and enhancing public-private alliances which should benefit in EP expenditure rise and more efficient use of the funds.

Interesting field for further research would be to analyse if there is correlation between government EP expenditure and the level of GDP in EU countries, the level of UE funds support for Member States and their progress in achieving environmental goals. It also seems reasonable to continue the studies of public spending on environmental protection especially in the context of more efficient use of limited funds.

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Ukraine – EU: The Univariate Analysis of International Trade between Ukraine and the Czech Republic

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Abstract

The relations between Ukraine and the European Union were initiated in December 1991, when the Minister for Foreign Affairs of the Netherlands, as the EU presiding country, officially recognized Ukraine's independence in his letter on behalf of the European Union. The relations of the parties began to develop in a new format of political association and economic integration with the signing and ratification of the Association Agreement between Ukraine and the EU in 2014. The aim of the article is to analyse the dynamics and build the general trend line of the international trade between Ukraine and the Czech Republic using the appropriate functions taking into consideration the value of R^2 coefficient. The descriptive statistics analysis of the international trade between the said countries follows afterwards. The time frame under research is 15 years – from the year 2004 till 2018 included. The dynamics of the trade between Ukraine and the Czech Republic is changeable and can be divided into four periods. The general trend line built using the power function is upward.

Keywords: descriptive statistics, economic integration, European Union, international trade, trade and economic cooperation, univariate analysis

JEL Classification: C20, F15, F63

1. Introduction

Since the Second World War, the world has witnessed growing economic integration facilitated by the creation of international institutional arrangements such as the World Trade Organization, ASEAN, and Mercosur. The EU stands out among these arrangements for its breadth and depth of institutional integration (Moschieri, Blake, 2019). The European integration includes several dimension that altogether form the European society as a supranational community based on voluntary community of Member States.... the economic dimension represents one of the most fundamental impacts on the shape of the integration which in the optimal case should prefer economic laws before political declarations (Horeháj, Šuplata, 2018). The main object of interest for scientists analyzing the phenomenon of European integration is, in most cases, the European Union. This comes from the fact, that the EU is the most important integrational grouping of the European continent and, at the same time, the most advanced one in the world. However, political and economic integration in Europe applies also to the countries that are not members of the EU (Băba, 2018).

Enlargement of the European Union in 2004 was the event of crucial historical importance, which had an impact not only on new entrants, but on the whole EU as well. The same holds true for the EU's international position which largely depends on the potential this organisation can rely on in its relations with the outside world. This includes geographic, economic, demographic and social, technological, military, and other resources of all its Member States. ... the enlargement, owing to an injection "fresh blood", provides the EU with better opportunities for future growth, including consolidation of its international standing (Milczarek, 2005). The main socio-economic changes the EU countries are facing include: economic restructuring, technological development, changes in work and the labour market, globalisation, mobility and economic interdependency, and blurring boundaries between spheres, institutions and identities. The global landscape of European states brings many vital adaptation and renewal challenges to the tables of European institutions and decision-makers (Viia, A., Toots, A., Mali, B.Č. et al., 2016). But, nevertheless, there are a great many positive concrete facts that have to do with Europe: equal rights for men and women, freedom of movement and establishment, tariff elimination, effective environmental protection and innovative energy policy – to name just a few of the main achievements. It has created and repeatedly confirmed fundamental values – above all, peace, freedom, tolerance and solidarity (Simonis H., 2016). While Europe has faced trials during the financial crisis and subsequent austerity, the European continent is still considered one of the most stable areas on the planet (McLean, S.B., 2014).

2. Problem Formulation and Methodology

The relations between Ukraine and the European Union were initiated in December 1991, when the Minister for Foreign Affairs of the Netherlands, as the EU presiding country, officially recognized Ukraine's independence in his letter on behalf of the European Union. Ukraine's policy on building relations with the European Union is implemented on the basis of the Law of Ukraine of July 1, 2010 "On the Principles of Internal and Foreign Policy". According to Article 11 of the said Law, one of the fundamental principles of Ukraine's foreign policy is "ensuring the integration of Ukraine into the European political, economic, legal space for the purpose of EU membership" (The Law of Ukraine "On the Principles of Internal and Foreign Policy" [online], 2010).

The relations of Ukraine and the EU began to develop in a new format of political association and economic integration with the signing and ratification of the Association Agreement between the parties in 2014. The EU and Ukraine have provisionally applied their Deep and Comprehensive Free Trade Agreement (DCFTA) since 1 January 2016. This agreement means both sides will mutually open their markets for goods and services based on predictable and enforceable trade rules. This is part of the broader Association Agreement (AA) whose political and cooperation provisions have been provisionally applied since November 2014 (European Commission [online], (2019). According to the State Statistics Service of Ukraine, during 2018 the European Union remained the key trading partner of Ukraine with the share of trade in goods and services of 41.1% of Ukraine's total trade turnover (Mission of Ukraine to the European Union [online], 2019).

The economic and trade relations between Ukraine and the Czech Republic have been developed since the time both states have gained independence. Possibilities of cooperation between Ukraine and the Czech Republic are specified by historical and cultural ties, friendly and partner political relations, economic contacts and common objectives in pursuing the course of European and Euro-Atlantic integration, common regional interests, the existence of the Ukrainian national minority in the Czech Republic and Czech - in Ukraine (Korsak, 2013).

The Czech Republic is interested in developing economic cooperation with Ukraine. Prime Minister of the Czech Republic Andrej Babiš said this during the Ukrainian-Czech Business Forum in Kyiv in November. "Ukraine is a very promising territory, which is historically and geographically close to us. Trade between our countries is growing," Babiš said. In his opinion, it would be very good to resume the work of the commission on the further development of relations between Ukraine and the Czech Republic. According to Babiš, the Czech Republic is ready to participate in a number of projects in Ukraine (Ukrinform [online], 2019). Taking into consideration everything stated above, there is no doubt the further development of mutual economic and trade relations between Ukraine and the Czech Republic is the matter of a great importance.

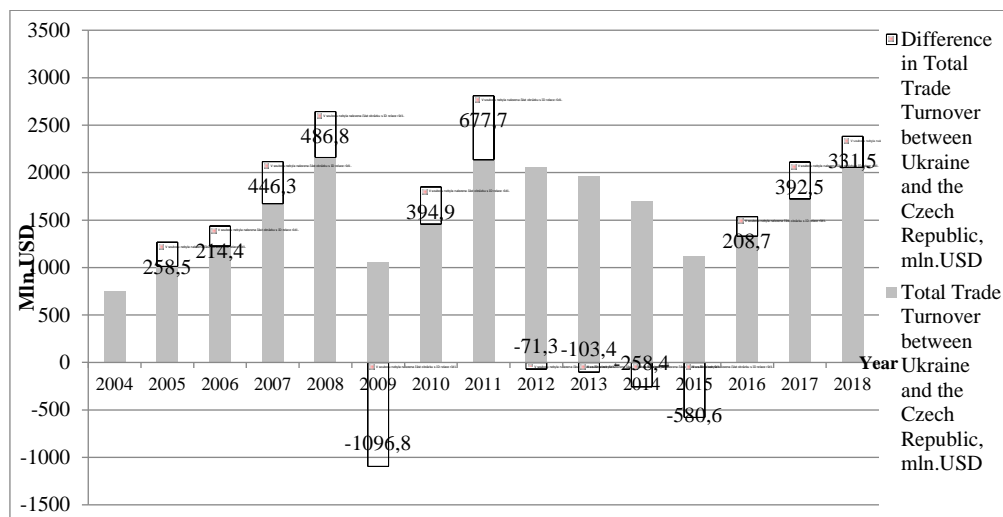
The data analyzed in the paper were taken from the official publications of the State Statistics Service of Ukraine. The time frame under research is 15 years – from the year 2004 till 2018 included. The dynamics of the trade between Ukraine and the Czech Republic was analyzed in terms of its changeability and differences if compared to the previous periods. Such descriptive statistics as 25th percentile, mean, median, 75th percentile, minimum and maximum values, sum, variance, standard deviation, range and interquartile range follow afterwards. The general trend line was built using the appropriate function (choosing from the exponential, linear, logarithmic, polynomial, and power functions) taking into consideration the value of R^2 coefficient.

3. Problem Solution

"Ukraine is a strategic partner of the Czech Republic not only politically but also economically. We have a great history and tradition of relations between countries and between individual enterprises. So we have something to work on. I am convinced that it is necessary to establish contacts not only at the political but also at the human level: districts, cities and settlements must cooperate. I think that indicates the desire of both parties to continue to keep in touch. And, in turn, we will create the conditions for such cooperation," said Andrei Babiš, the Prime Minister of the Czech Republic (Eastwestmentor [online], (2019). To have the general overview of the economic and especially trade relations between Ukraine and the Czech Republic, let's analyse the total trade turnover between the said countries for the last 15 years, that is from the year 2004 till the year 2018 included. The total trade turnover between Ukraine and the Czech Republic with differences if compared to the previous periods in millions of US dollars is presented in Figure 1.

Having considered the data depicted in the figure given above, the total trade turnover between Ukraine and the Czech Republic can be described as very changeable. The upward trend from 2004 to 2008 included was changed by the decrease of 1,096.8 mln USD in 2009. Such a huge decrease in the amount of the total trade turnover can be explained by the influence of the global financial crisis of 2008. The fall in 2009 was replaced by the next increase in the volume of the total trade turnover in the period after 2009 till 2011 included. Then, again, we observe the downward trend from 2011 till 2015 with a great decrease in the amount of the total trade turnover in the years 2014 (258.4 mln USD) and 2015 (580.6 mln USD), which can be explained, as to the author's point of view, by the events in the political life of Ukraine. The situation started changing again in the direction of the increase in the total trade turnover after the year 2015 to the year 2018, the last year of the time frame under analysis.

Figure 1: Total Trade Turnover between Ukraine and the Czech Republic with Differences to the Previous Periods, mln USD



Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

The fact that the trade relations between the countries mentioned above have a steady positive trend during the last three years indicates the right direction in the improving of the Ukrainian – Czech trade relations. The greatest negative change in the amount of the total trade turnover between Ukraine and the Czech Republic can be observed in 2009 (1,096.8 mln USD) and the greatest positive change – in 2011 (677.7 mln USD).

The confirmation of the analysis made above can be followed in Table 1. The values in the table are presented in the descending order, that is the least value of the total trade turnover can be observed in the year 2004 (in the first row of values) and the largest one – in the year 2008 (in the last row of values).

Table 1: Extreme Values of the Total Trade Turnover between Ukraine and the Czech Republic, mln.USD

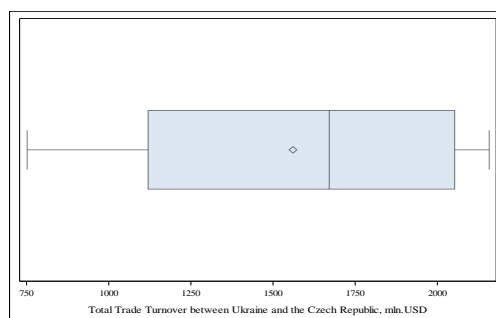
Extreme Values of the Total Trade Turnover					
Lowest			Highest		
Value	Year	Observation	Value	Year	Observation
751.8	2004	1	1,958.9	2013	10
1,010.3	2005	2	2,052.6	2018	15
1,061.0	2009	6	2,062.3	2012	9
1,119.9	2015	12	2,133.6	2011	8
1,224.7	2006	3	2,157.8	2008	5

Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

Taking into account the analysis of the data presented in Figure 1 and the data presented in Table 1, the following statement can be made – the trade relations between Ukraine and the Czech Republic during 15 years can be divided into four periods: the first one (upward) – 2004 – 2008, the second one (upward) – 2009 – 2011, the third one (downward) – 2012 – 2015 and the fourth one (upward) – 2016 – 2018. Taking into account the data presented in Table 1, we can divide the trade relations between Ukraine and the Czech Republic during 15 years into three upward periods: the first one – 2004 (observation 1) – 2008 (observation 5), the second one – 2009 (observation 6) – 2011 (observation 8), the third one – 2015 (observation 12) – 2018 (observation 15) and one downward period – 2012 (observation 9) – 2015 (observation 12).

The next step of the research of the total trade turnover between Ukraine and the Czech Republic is the analysis of the descriptive statistics of the values from the time frame under analysis. The visual presentation of the main descriptive statistics of the values mentioned above can be followed in Figure 2.

Figure 2: Box Plot for the Values of the Total Trade Turnover between Ukraine and the Czech Republic



Source: author's own elaboration

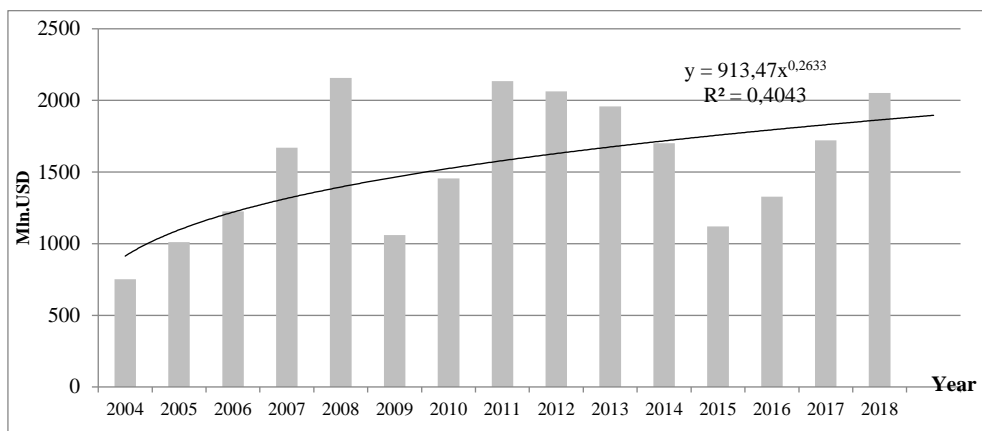
The data depicted in Figure 1 allow us state that the minimum value of the variable “Total Trade Turnover between Ukraine and the Czech Republic” for the time frame under analysis is 751.8. The 25th percentile or, in other words Quartile 1, equals 1,119.9. The mean, that is the average value, is 1,560.67. The 50th percentile or, in other words median, is 1,671. The 75th percentile, that is Quartile 3, equals 2,052.6. The maximum value for the variable under analysis is 2,157.8. The sum of the values of the total trade turnover between Ukraine and the Czech Republic for the time frame under analysis is 23,410 mln USD. In addition, the variance is 212,380.43 and the standard deviation is 460.85. The range is 1,406 and the interquartile range is 932.7. The qualitative value of the statistical analysis results given above can be assessed only if compared to the ones of another subject. The detailed explanation and application of the said results will be given in the extended research made by the author.

To continue the analysis of the total trade turnover between Ukraine and the Czech Republic the trend line was built in Figure 3.

The trend line presented in Figure 3 was built using the power function (choosing from the exponential, linear, logarithmic, polynomial, and power functions) taking into consideration the value of R^2 coefficient. Though the value of the R^2 coefficient of the power function is not that high (0,404), it is the highest value of the R^2 coefficients among the functions mentioned above. The said trend line is upward not only during the time frame under analysis but continues its upward direction during the next period of time, that is a year. Only one period

of time was taken for the projection of the trend direction because of the changeability of the data dynamics.

Figure 3: Total Trade Turnover between Ukraine and the Czech Republic, mln USD



Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

4. Conclusion

The Czech Republic remains one of the most important and promising trade and economic partners of Ukraine in Europe. Cooperation in the economic sphere with the Czech Republic is important for Ukraine not only in terms of mutual trade volumes, but also as a factor in facilitating Ukraine's integration into the European economic space (Eastwestmentor [online], 2019).

The total trade turnover between Ukraine and the Czech Republic can be described as very changeable. The trade relations between Ukraine and the Czech Republic during 15 years can be divided into four periods - three upward and one downward period. The greatest negative change in the amount of the total trade turnover between Ukraine and the Czech Republic can be observed in 2009 (1,096.8 mln USD) and the greatest positive change – in 2011 (677.7 mln USD). The trend line of the total trade turnover between Ukraine and the Czech Republic during fifteen years was built using the power function taking into consideration the value of R^2 coefficient. The said trend line is upward not only during the time frame under analysis but continues its upward direction during the next period of time, that is a year. Only one period of time was taken for the projection of the trend direction because of the changeability of the data dynamics.

The simple statistics analysis made above is very important and is the beginning of any statistical procedure. It will help identify any errors, if any, in the data set under analysis, which could lead to incorrect conclusions. The analysis made in the paper is the first step to the more sophisticated statistical analysis.

Among the steps made recently in the direction of the strengthening of economic and trade cooperation between Ukraine and the Czech Republic, the following ones are to be paid attention at: in 2016 during the meeting of the Prime Ministers of Ukraine and the Czech Republic, the Head of Ukrainian Government pledged Ukraine's interest in strengthening cooperation with the Czech Republic, in particular in infrastructure, business and defense

areas. Discussing the prospects of deepening trade and economic cooperation, the parties agreed to resume the work of Ukrainian-Czech Intergovernmental Commission on economic, industrial, scientific and technical cooperation and to hold its meeting in Ukraine in the near future (KMU [online], 2019).

In 2018 during the eighth meeting of the Ukrainian-Czech mixed intergovernmental commission on economic, industrial and scientific and technical cooperation, the sides agreed to promote the organization of the production of agricultural machinery in Ukraine and the expansion of export-import supplies of agricultural products. Apart from that, the parties agreed to deepen cooperation in automotive industry, which had been successfully developed for many years in the territory of Ukraine with the assistance of Czech investments (KMU [online], 2019).

In what was the first visit of a Czech Prime Minister to Kyiv since 2008, the Czech Republic's Andrei Babis and Ukrainian President Volodymyr Zelensky announced a relaunch of relations between the two states. Along with Czech government leadership, 85 Czech entrepreneurs arrived in Kyiv in November 2019 for the Ukrainian-Czech Business Forum. The program focused on economic cooperation, business conditions in the two countries, the Czech experience integrating into the European Union market, and other issues (UATV [online], 2019). Despite everything stated above, there is still much to be done to foster economic, especially trade, cooperation between Ukraine and the Czech Republic for the strengthening of the economic and political weight of the said countries on both European and global arenas.

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Quality or Still Dual Quality?

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Abstract

The free movement of goods does not necessarily mean that each product must be the same in all parts of the single market. The question of the dual quality of some products marketed under the same brand or trademark but with different content, composition or quality across the EU Member States is still a topical issue in many discussions and surveys. Quality, in particular dual quality of food products is a source of consumer concern and a loss of consumer confidence in the single market. The European Commission is taking action in many areas and, in order to restore citizens' confidence in the single market, has decided to focus primarily on the food sector. Ensuring food safety and quality in the EU is an extremely complicated legal and implementation issue. The article follows the author's contribution from the International Conference on European Integration 2018 entitled "Consumer in the European Union and Dual Food Quality" and evaluates the changes that have occurred since its publication.

Keywords: consumer protection, dual food quality, legal regulations, quality, single market

JEL Classification: A20, D18, K20

1. Introduction

The issue of dual food quality is a specific area dealing with consumer protection as the whole and belongs to newer topics, which are being paid higher attention by the EU only recently. For example, the European Parliament, in its resolution on a new agenda for European Consumer Policy (Resolution of the European Parliament 2012/2133 (INI)), draws attention to consumers' concerns in different member states about possible quality differences between products of the same brand and packaging distributed within the single market and the unacceptability of any form of discrimination against consumers. At the same time, it calls on the European Commission to investigate this issue in order to assess the need to adapt existing Union legislation.

In a single market, which is generally perceived by consumers as a market where they shop and where goods are circulated freely and where exists an equal access to goods, consumers a priori do not expect products sold under a particular brand to vary from country to country. Insufficient information on differences in products marketed in different member states under the same brand may influence consumers' decisions on commercial transactions.

The issue of dual quality and labeling of food products in different member states is reflected in particular in the following facts. The manufacturer enters the market with the products having the same or similar packaging but being of different qualities, different tastes and compositions, different grammages, etc., which are not recognizable to the ordinary consumer in any market.

When implementing new product into particular market, the manufacturer very often uses the product with more quality content (e.g. higher amount or higher quality of fat items in the product) with the aim to attract consumers' attention and "teach" them to buy such product and like it. After while though, a formula would change without consumer being informed about it in clear, significant, transparent and not misleading way, i.e. that it is different product with different content, grammage, quality etc.

The issue of dual product quality is thus manifested at two levels. The first level consists in the initial offering of quality food and its subsequent replacement for products of lower quality, composition or grammage after the product has been introduced in the market and consumers become accustomed to buying it.

The second level is the level of different foods (quality, composition, grammage) with the same or very similar (misleading) packaging in different member states. This level is all the stronger because of the free movement of persons, since a consumer from one state residing in the territory of another state cannot be certain that a product which he knows to a certain quality from his home state corresponds to a product he is purchasing in the state he is now.

The aim of the article is to follow up the author's paper presented at the International Conference on European Integration 2018 under the title "Consumer in the European Union and Dual Food Quality" and to point out and evaluate changes that have occurred since its publication.

2. Initiatives of European Commission

The European Union is by no means interested in forcing manufacturers to change the composition of their product or to determine the exact composition of individual products. On the other hand, it is necessary (in order not to mislead the consumer and his overall impression of the product at the time of purchase) that the consumer is sufficiently and transparently informed that the product he has purchased or knows from another member state is different.

Since the speech on the state of the Union in 2017 (European Commission, 2017), in which the then Commission President Jean-Claude Juncker sought to address the issue of dual product quality, the European Commission has taken various initiatives. For example, following the discussions held by European Council in March 2017, the Commission:

- introduced the question of better functioning of a food chain, the aim of which was to start a dialog between production, consumers and national authorities,
- proposed a common research center, which will work on instructions for common testing methodology while the final aim is to achieve comparable and liable tests within the entire EU,
- to achieve a clarification, transparency and improvement of information on precise product content, the Commission held negotiations with companies, mainly with food manufacturers and retailers about how to ensure a full transparency as it comes to products content (beyond current legal duties),
- has issued a set of guidelines to help national authorities to implement the EU food and consumer protection legislation,
- allocated more than EUR 4.5 million to address this problem.

In addition, the Commission aims to enforce relevant EU legislation, in conjunction with national consumer protection authorities and food control authorities. Another option

considered is the development and adoption of a code of conduct for manufacturers, which would set standards to be respected in order to avoid double quality problems.

3. European Legal Regulations

The role and responsibilities of member states, and in particular consumer protection authorities and food control authorities, are to ensure compliance with the EU Common Consumer Law and to enforce European food safety and labeling legislation.

Several EU legislations covers the issue of dual product quality. With regard specifically to food products, these are the provisions:

- „EC General food law regulation” (Regulation (EC) No. 178/2002), which should ensure that the only safe food products would enter the EU market and the consumers would be informed precisely and would be not mislead as it comes to content and characteristics of food offered for sale.

EC Regulation No. 178/2002 lays down the general principles and requirements of food law for food entering the market. It determines legal requirements and procedures dealing with food safety. This regulation has gone through review last year and in autumn 2019, there was published a new regulation on transparency and sustainability of the EU risks evaluation within food chain. The renewed regulation will come into force at the end of March 2021. This legislation is and will be the starting point for a very comprehensive system of European and national food law regulations.

- „EU Regulation on the provision of food information to consumers” (Regulation (EU) No. 1169/2011), which determines general principles and requirements for food labeling including the obligation to list full content of food items and thus enables the customers to gain all information on food product.

The Regulation No. 1169/2011 contains the list of obligatory information, which should be mentioned basically on all food products such as name, items list, number of particular elements or groups of elements, allergens, nutrition data etc. To keep the rule of general principle, information on food must not be misleading, must be precise, clear and easily understandable. For this purpose, the regulation determines special requirements as for mentioning obligatory information including minimum size of letters.

Another important principle introduced by the Regulation is that food information must not give the impression by appearance, description or representation that a particular food or ingredient is present, although in fact a commonly used ingredient or certain naturally occurring ingredient in that food has been replaced by different item or component.

- „Unfair Commercial Practices Directive” (Directive 2005/29/EC) defines the unfair business-to-consumer commercial practices which are prohibited in the European Union. It applies to any act or omission directly related to the promotion, sale or supply of a product by a trader to consumers. It thus protects the economic interests of consumers before, during and after a commercial transaction has taken place. It ensures the same level of protection to all consumers irrespective of the place of purchase or sale in the EU. This horizontal directive relates to many commercial practices which are also regulated by other general or field legal EU regulations.

Unfair Commercial Practices Directive functions as a safety net ensuring the option to maintain high common level of consumer protection, adds other legal EU regulations and removes their insufficiencies. The Directive forbids misleading practice. The practice is

misleading if it contains false or untrue information or is likely to deceive the average consumer, even though the information may be correct, and cause them to take a transactional decision they would not have otherwise taken.

4. Food Safety and Dual Quality

Food production takes leading place among the fields of manufacturing industry in all EU member states. By its performance and increasing competitiveness, the food industry aims to ensure inhabitants dieting by food production and its sale; the food must be healthy, safe, quality and accessible as it comes to the price.

Quality and safe food are being interested in by each of us. There is disturbing information on the Internet, in mass media or different professional forums. Sisto,R., Pellegrini, G, La Sala,P. (2019) also says that „*many tests and studies carried out at European level prove poorer-quality products offered by Multi-National Companies to Central and Eastern Europe consumers even if with the same packaging and prices (or even more expensive) of Western countries*“.

What the term quality food means? By the Act No. 110/1997 Coll., on food and tobacco products as amended “*the food quality is the set of characteristics of individual types, groups and subgroups of food and tobacco products, parameters of which are determined by the law and regulations*”. By this legislation, not only the question of public health protection and consumer protection is dealt with but the question of basic criteria for quality by particular commodities as well.

As for practice, the term quality is much wider. The manufacturer decides on entire scope of other marks and quality criteria, which are not controlled by the state supervising authorities and thus they are only of recommending character. Quality norms, technical conditions and technological procedures can contain them but they are not obligatory. For consumer, the product quality is one of the fundamental requirements therefore it is necessary to make an effort to do so just from conception to own product realization. In the EU, the quality and certification of food quality is left to voluntary initiative of manufacturer. The norms can be of wider validity by particular commodities (e.g. branch norms), they can involve the whole group of manufacturers and products (e.g. products of ecological agriculture or certification of concrete characteristics of traditional or regional products). Requirements of consumers and purchasers, dieting habits and tradition create quality criteria, on which a success of products sale and their competitiveness in the market depends.

To evaluate and assess the food quality, different sense and laboratory methods are used. Entire food quality is monitored, which is given by a complex of quality characteristics, each of which is determined by the set of quality marks. A specific characteristic or ingredient of food and feed is considered to be a quality characteristic. For food, we can distinguish between hygienic, nutritional, sensory, technological, utility and information quality.

Some of mentioned quality aspects are violated though. For example, food forging. Cizkova, H., Sevcik, R., Rajchl, A., Pivonka, J., and Voldrich, M. (2012) state cases of “*food forging, among which above all food exchange for cheaper one, food extension by cheaper item, food extension or forging aiming food characteristic improvement, not following declared technological procedure or stating the higher item content against the real one, trademark misuse etc. belong*”. Food forging is one of the first factors, which can make food danger for consumer but mainly such food products show dual quality marks.

Because there still are big differences between food law within member states regarding an approach, rules and procedures (and those differences can prevent food from free movement),

member states adopt regulations dealing with food. It is necessary to determine common definitions, principles, requirements and procedures in order to create a clear frame and common basis for regulations at the EU level and particular member states adjusting information on food provision. Motlicek, Z., Vavrina, J. (2016) mention that “*Business entities should consider opportunities of EU Food safety and quality policy, especially in the area of food production' quality towards enhancement of their competitiveness.*”

5. Supervising and Regulating Bodies for Food Area

Based on EC general food law regulation (Regulation (EC) No. 178/2002), the European Food Security Authority – EFSA was established seated in Parma. New provisions of this Regulation regarding EFSA will come into force in July 2022. In the EU, EFSA is the key body to evaluate a danger as for food safety, is independent source of information on all issues of this area, evaluates risks connected to food chain and provides the public with information on danger and risks connected with food.

EFSA was established with the aim to provide with scientific counselling and support in the frame of legal regulations and EU policy in all areas, which can influence directly and indirectly the food safety as well as health and good life conditions of animals and plant protection. The main tasks of EFSA can be summarized as follows:

- independent scientific counselling for food safety and other connected questions as the basis to make decision at risk management,
- counselling in technical food questions for the purpose of supporting a policy and legislation development dealing with food chain safety,
- collection and data analysis of dieting habits, data of monitoring programmes and other data regarding potential risks, which are needed to monitor food chain safety within the EU,
- identification and early-warning about rising danger,
- maintenance of early-warning system covering food and feed,
- informing the public about all questions of its effect.

EFSA possesses of own professionals but its work is also supported by the net of particular organizations and experts of EU member states.

Another important regulator connected with regulative frame in the field of food quality and safety and Regulation No. 178/2002, the system RASFF is, established by EFSA based on par. 50 of this Regulation.

RASFF (Rapid Alert System for Food and Feed) serves to inform about direct or indirect risk connected with human health coming from food or feed. It allows rapid and efficient sharing of dangerous food or feed information between members of the system: the European Commission, EU member states and EFTA (Iceland, Liechtenstein and Norway) and the European Food Safety Authority (EFSA).

Contact points have been established in all member states and the European Commission to exchange information on unsafe food or feed. If a RASFF member has information about a serious health risk for food or feed, it must immediately inform the European Commission through RASFF.

In the Czech Republic, the functioning of RASFF is regulated by Government Regulation No. 98/2005 Coll., establishing an early-warning system on the emergence of risks to human health from food and feed.

The National Contact Point (NCP) in RASFF is pursuant to Section 15 (4) of Act No. 110/97 Coll., on food and tobacco products, the Czech Agriculture and Food Inspection Authority is. The NCP collects information from all food and feed supervisory authorities in the Czech Republic. If a dangerous product is detected by one of the supervisory authorities in the Czech Republic, the NCP sends information obtained from individual participants of the national system to the European Commission. The Czech Republic is then informed about the audit findings in the EU member states.

6. Results of Public Opinion Poll of 2019

In June 2019, the European Commission published the results of a pan-European food product testing campaign following the testing of food products across the EU using the same methodology to raise awareness of the dual quality of food products in the EU. These results point to the fact that some products are still labeled with the same or similar brand, although their composition varies.

The study, which analyzed almost 1400 samples of 128 different food products in nineteen EU countries, was carried out by the Joint Research Center, the Commission's internal department for sharing a scientific knowledge. The testing was based on a harmonized methodology developed by the Joint Research Center in cooperation with member states. This methodology allows comparable sampling, testing and interpretation of data across the EU. All EU member states were invited to gather information on the composition of selected food products offered in their markets.

In most cases the composition corresponded to the way the products were presented, 23% of products had the same front side of the packaging and the same composition, and 27% of the products had different compositions in different EU countries with different fronts of the packaging. It is also clear from the results of this study that 9% of the products compared had a different composition, although the front of their packaging was identical. For another 22% of products with different compositions, the front of the packaging was similar (MPO, 2019).

In June 2019, the Czech Consumer Association, with the support of the Ministry of Industry and Trade of the Czech Republic and in cooperation with the SC&C market research agency, conducted a survey among Czech consumers on what they think of dual quality and what measures they would like to see. Results of research conducted by CAWI method within 3rd - 19th June, 2019, which was attended by 805 respondents from all over the Czech Republic, are summarized as follows (SČS, 2019):

- almost all consumers are convinced that dual quality products (96%) are practiced in food, and a high number of consumers are convinced that double quality is practiced in drugstores (81%) and in consumer goods (44%),
- 97% of consumers believe that the Czech Republic should impose stricter rules on food quality requirements for food to be sold in the Czech market, and 91% agree even if this would mean a practical reduction in imports of cheap food,
- 3 out of 4 Czech consumers disagree with the different composition of products of the same brand even if the manufacturer does not violate any law,
- according to most Czech consumers (78%), the ban on double quality should be included in the Consumer Protection Act for all products,
- 9 out of 10 Czech consumers consider the different composition of products to be an unfair commercial practice.

7. Conclusion

The general objective of food law is to provide consumers with an awareness that enables them to make an informed choice of the foods they consume and to prevent any practices that may mislead them.

General tests in the EU and the Czech Republic confirmed that double quality is a serious problem, exists for a significant part of the tested products and its long-standing doubting by the European Commission was not appropriate.

The attitude of consumers paying for the goods sold in our country resulting from surveys leads to the unequivocal view that if a product introduced under a certain well-known name, brand, graphic representation, etc. is on the market, it is a consumer deception and unfair commercial practice, when marketed with different characteristics or composition to different markets. Especially if there is a reasonable presumption that different characteristics or recipe can have a significant impact not only on its quality but also on the price, even if its characteristics or composition are correctly stated on the package, label or package insert.

This year, two amendments will come into force (amendment to the Consumer Protection Act and the Food Act). This results from the incorporation of the revision of the General Directive on Unfair Commercial Practices and at the same time the ban on dual product quality in the Czech market. The amendment to the Consumer Protection Act proposes an amendment to the provisions on misleading commercial practices, stating that a commercial practice will (among other things) be considered misleading also "if it involves any marketing of a product as identical to a product placed in the market in another EU member state, even though such a product has substantially different composition or characteristics, unless justified by well-founded and objective facts". (Act No. 634/1992 Coll).

The amendment to the Food Act should prohibit the placing of the food "apparently marked identically to a food marketed in another EU member state, although the food marketed in the Czech Republic has different composition or characteristics". (Act No. 110/1997 Coll.)

Violation of the ban on misleading commercial practices or marketing of seemingly the same foods with different composition or characteristics will be penalized with a penalty of up to CZK 50 million.

The author of the article already drawn attention to dual food quality two years ago (Klabusayová, N., 2018) and assumed that things would change. Today, it can be said that the European Commission has taken some steps which should help to solve this problem, however, it is still not enough. Provided researches show though that the issue of dual quality is still unresolved and, in some respects, dismal.

From the point of view of legislation compliance, it will be very interesting to monitor how supervisory authorities will be able to sanction and enforce it, and especially when and to what extent consumer's confidence in certain products will be restored and how much double quality issues will continue to be discussed.

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Mission-Oriented Innovation Policy as a New Approach in the EU

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Abstract

Innovation is perceived as a source of economic growth and competitiveness of enterprises, regions and countries. Nevertheless, innovation can also contribute to addressing important social and environmental challenges. Policymakers across Europe are aware of this fact and are therefore increasingly focusing on mission-oriented innovation policy. Mission-oriented innovation policy is an innovation policy that aims at solving critical societal challenges that go beyond one policy field, and that is implemented to meet ambitious social and environmental objectives. In recent years, the need for such a concept has been underlined by both the European Union and the OECD. For example, the European Commission uses this approach to design the Horizon Europe 2021-2027 framework programme. In our paper, we explain the features of the mission-oriented innovation policy and present two case studies from EU countries where this policy has been implemented.

Keywords: European Union, innovation policy, research and development

JEL Classification: O21, O38, R58

1. Introduction

Innovation policy is systematic support for the creation of innovation, which eliminates the consequences of negative market development or failure and which helps key actors (enterprises, research institutes, universities, etc.) to overcome the constraints and barriers in the innovation environment (Žítek and Klímová, 2015). The direct goal of traditional innovation policy is to support and strengthen the level of innovation activity in the economy and society or to change the trajectory of innovation processes (Borrás and Edquist, 2014). Through these direct goals, governments want to achieve an indirect or ultimate goal that lies in achieving economic growth and increasing competitiveness. Support for research and development is a crucial part of the innovation policy as it creates new knowledge necessary for innovations (Žítek, 2016). Furthermore, the educational system is also closely connected to promoting innovation (Halásková and Schwarzová, 2018).

Innovation can contribute to addressing important societal and environmental challenges. Policy-makers across Europe are aware of this fact and are therefore increasingly focusing on mission-oriented innovation policy. This policy deals with providing new solutions to be implemented in practice, often reflecting the specific challenges that are the subject of extensive policy debates (Edler and Fagerberg, 2017). A typical example is a promotion of innovative defence (military) solutions or responses to global warming threats. The mission-oriented policy represents a broader approach to innovation policy that focuses not only on achieving economic goals but also seeks to address societal and environmental challenges.

In the context of innovation policy, which has broader social and environmental objectives, it is necessary to clarify the relationship between the two concepts that appear in the literature: mission-oriented innovation policy and innovation policy of grand challenge (or challenge-driven policy). Some authors (e.g., Coenen et al., 2015) emphasize that these are two different concepts that cannot be confused. They refer to a policy aimed, for example, on climate change, population ageing or food safety. Proponents of this approach argue that the policy of grand challenges is more multidisciplinary, requires a broader mix of technical and social innovations, and therefore requires greater cooperation among many actors. This policy is usually managed from a top-down perspective and focuses on issues that are addressed at the level of EU-level transnational organizations (Leijten et al., 2012; Kuhlmann and Rip, 2014) or OECD. However, we agree with those authors (e.g., Cagnin et al., 2012) who consider the grand challenge innovation policy as part of a mission-oriented innovation policy. Through that, we want to emphasize that even mission-oriented innovation policy evolves over time. Indeed, in the past, it has focused more on national issues, particularly in defence and industry, and in today's globalized world, it includes solutions that have an international dimension and require longer-term attention. In connection with the mission-oriented innovation policy, terms such as responsible research and innovation policy (e.g., Fitjar et al., 2019) or innovation policy aimed at sustainability transitions (Kern et al., 2019) are also used.

The aim of our paper is to draw attention to a relatively new trend in the field of innovation policy, which pays more attention to addressing societal challenges, and to discuss its essential features. An integral part of this goal is to present a concrete application of the mission-oriented approach in practice. The methodological approach used in this article is mainly based on two case studies. The studies were chosen to serve policymakers and academics as an example of the best practice. As the first case study, we have chosen the AAL programme, which has a significant European dimension and has been implemented since 2007. The fundamental topic of this programme is the ageing population. The second case study has a stronger national dimension. Mission-oriented innovation policy is popular in the countries of Northern Europe, which are considered as innovation leaders and, at the same time, are known for their active approach to addressing social and environmental issues. That's why we chose the Swedish Challenge-Driven Innovation programme as a case study. Both cases have many common features. Above all, they represent more comprehensive initiatives under which individual projects are supported. For this reason, we complemented our case studies with two projects that were granted in the framework of the presented initiatives.

2. Implementation of Mission-Oriented Innovation Policy in the EU

The European Union faces many challenges and a high level of social inequalities. Therefore, an increasing standard of living and quality of life is perceived as the priority (Staníčková, 2018). Addressing grand societal challenges is currently one of the main goals of the EU in the field of research and innovation policy too. The impetus behind this shift was the publication of the Lund Declaration in 2009, which urged a focus on tackling grand societal challenges, conditioned upon overcoming a rigid thematic approach to scientific research (Lund declaration, 2009). Tackling broader societal challenges requires intensified cooperation among member states (as well as non-member) in the form of joint research efforts and funding from both national and private sources. That comprises initiatives such as Joint Programming Initiatives, European Technology Initiatives or European Innovation Partnerships. The challenge-driven approach is also adopted in the largest EU research and innovation programme Horizon 2020. Within the pillar of Societal Challenges, the development of solutions resulting from multidisciplinary collaborations to seven broadly defined societal challenges is supported (European Commission, 2020). At the request of the

European Commission, a "Mission-Oriented Research and Innovation in the European Union" (Mazzucato report) was published in 2018 (Mazzucato, 2018). It is a set of strategic recommendations for mission-oriented research, development and innovation that will be implemented in the upcoming 9th Framework Programme Horizon Europe (2021-2027). This programme will have a budget of approximately EUR 100 billion. In April 2019, the provisional deal on Horizon Europe was approved by the European Parliament and further negotiations are now underway. During the preparation of this programme, a strong accent was placed on the mission-oriented approach. A total of five mission areas have been identified and a mission board and mission assembly were established for each of the mission area. These bodies should define missions more precisely and incorporate the views of the public and experts (European Commission, 2019).

The 17 Sustainable Development Goals are a crucial element in establishing the framework for implementing mission-oriented policies. These "Goals for People, for Planet" were adopted in September 2015 at the United Nations Summit in New York as part of the 2030 Agenda for Sustainable Development. These objectives represent the development agenda for 2015-2030. They are defined as follows (United Nations, 2015): 1) no poverty, 2) zero hunger, 3) good health and well-being, 4) quality education, 5) gender equality, 6) clean water and sanitation, 7) affordable and clean energy, 8) decent work and economic growth, 9) industry, innovation and infrastructure, 10) reduced inequalities, 11) sustainable cities and communities, 12) responsible consumption and production, 13) climate action, 14) life below water, 15) life on land, 16) peace and justice strong institutions and 17) partnership for goals.

Table 1: Features of Mission-Oriented Innovation Policy

Feature	Meaning
Directionality	contribution to solving societal challenges or industry transformation
Intentionality	clearly and well-expressed goals
Clearly set timeline	existence of schedule and milestones
Public and private investments	mobilisation and combination funds from various resources
New knowledge creation	conducting basic research
Focused on knowledge application	conducting applied research (this research can follow from the basic research)
Demand articulation	respond to demand (or need) for innovation
Multi-disciplinary	combining two or more scientific disciplines or technologies
Joint coordination	multi-level or horizontal governance of policies and finance
Reflexivity	flexible policy design and timely monitoring
Openness	connection to the international environment and actors, involvement of citizens

Source: authors' own processing based on JIIP et al. (2018)

The essential features of the mission-oriented policy can be derived from the criteria that were used for project evaluation in the report to the European Commission (JIIP et al., 2018). These criteria are listed and explained in Table 1. The directionality, intentionality and focus on specific objectives corresponding with societal challenges are the most important of them.

3. Application of Mission-Oriented Innovation Policy in Practice

In the following text, attention is paid to two empirical studies, which are an example of best practice. First, we introduce the European AAL programme and then focus on the Swedish Challenge-Driven Innovation programme.

3.1 Active and Assisted Living

The Active and Assisted Living Programme (AAL2) is an initiative that aims to improve the quality of life of older people in Europe through the development of information and communication technologies. The initiative is implemented in the period from 2014 to 2020 and is part of the 8th Framework Programme Horizon 2020. However, the initiative took already place from 2007 to 2013 under the name Ambient Assisted Living (AAL1), when it was funded by the 7th EU Framework Programme. The program is managed by the AAL Association, which resides in Brussels and was established in 2007. The AAL programme responds to the fact that Europe's population is undergoing significant changes and that people live longer than before and the birth rate is lower at the same time. That causes an aging population. It is expected that more than half of the EU population is over 65 years old in 2070 (AAL Association, 2020). The aging population poses challenges for the quality of life of older people and their carers. At the same time, it also represents a great opportunity and space for new solutions. The main objective of the programme is to create the conditions for a better quality of life for older people and to strengthen industrial opportunities in the field of healthy ageing technology. The AAL programme focuses on various ageing-related topics such as social inclusion, management of chronic conditions, management of daily activities, mobility, access to online services and support for informal carers.

The program finances projects that lead to the creation of market-ready products and services for older people. Each year there is one call with a specific focus. E.g., the theme of the 2020 challenge is "Healthy Ageing with the Support of Digital Solutions" and in 2015, it was "Living Actively and Independently at Home". Each granted project has to involve SMEs, research organizations and end-user organizations. Since 2008, more than 200 projects have been supported (AAL Association, 2020). Besides financial support, projects can also receive other forms of assistance, such as non-financial support to commercialisation, promoting of standards and interoperability developed solutions and an AAL Smart Ageing Prize. This prize rewards projects offering the most promising ICT solutions for active ageing (JIIP et al., 2018).

About twenty EU countries (including the United Kingdom) and three other countries (Israel, Norway and Switzerland) participate in the programme. Neither the Czech Republic nor Slovakia is participating in it. Therefore, the participation of these entities cannot be covered by the program budget. The budget for the period 2014-2020 is EUR 700 million. The European Commission will contribute 175 million, the same amount will be provided by the participating states and EUR 350 million will be financed from industrial partners. Individual subjects participate in the programme according to the conditions of the respective national R&D programmes. That means that each partner in the consortium is administratively managed by the agency of its own country. Most of the rules are determined at the national level and only the basic conditions are determined centrally at the European level (AAL Association, 2020).

DOMEO Domestic Robot for Elderly Assistance

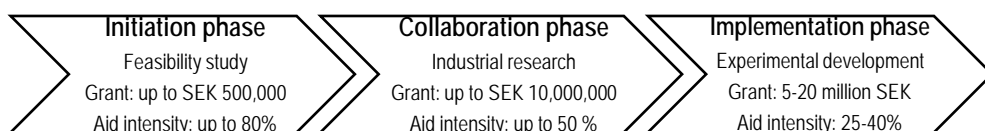
DOMEO project aims at improving the wellbeing and autonomy of older adults through assistive robotics into the domestic sphere. Thanks to the DOMEO robot, older people can stay longer and safer at home. DOMEO also makes the daily work of caregivers easier. DOMEO is an open robotic platform for the integration and adaptation of personalized home care services. This platform includes two types of robots (cognitive and physical), graphic and tactile interfaces, voice recognition and speech synthesis, cloud services for tele-presence and tools for integration of various sensors and services. The total budget of the project was EUR 2,400,000, of which EUR 2,160,000 was funded from public resources. This project was coordinated by a French company Robosoft and involved seven other partners. Two SMEs, one large company, four research organizations and one end-user participated in the project. Besides France, Austria and Hungary participated in the project. When assessing the AAL programme, the coordinator appreciated mainly provided services that enabled the successful conclusion of the projects. The company also appreciated the opportunity to communicate with the broader scientific community and disseminate findings (AAL Association, 2015).

3.2 Challenge-Driven Innovation

Challenge-Driven Innovation is a Swedish initiative designed to support the development of sustainable solutions to societal challenges that require broader cooperation among different sectors, scientific disciplines and policy fields. Generally, it intends to foster the economic growth of Sweden in the light of social welfare and long-term sustainability. The projects supported under this initiative must contribute to the UN Sustainable Development Goals in four main areas: Future Healthcare, Competitive Industry, Sustainable and Attractive Cities and the Information Society. They should also encompass some of the following aspects, e.g., affect the whole socio-technical system (including challenging current mental models), have a systematic approach to solving societal challenges, or attract international expertise and investment to Sweden and, therefore, strengthen country's global competitiveness. (Vinnova, 2019a; Vinnova 2019b; Lelková, 2020) The first call was opened in May 2011.

The programme is divided into three following phases, which are built on each other and aim to implement fully developed solutions (see Figure 1). To proceed to the next stage, the project must successfully complete the previous one, which means that the number of supported projects is continually decreasing. Once the first phase is completed, on average, 30-50% of the projects advance to the second phase and then 40-80% of them continue to the third phase (Vinnova, 2019b). The necessary financial involvement of the project partners is gradually increasing, thus, mobilizing additional resources. It is necessary to mention that the focus of the program enables bottom-up experimentation through all phases as the aim of the project is defined by the applicants themselves.

Figure 1: Three-Stage Process of the Programme



Source: authors' own processing based on Vinnova (2019b)

The initiation phase lasting about nine months focuses on developing ideas and planning on how these ideas will be implemented and exploited. The scope of supported activities includes

creating detailed needs analysis or seeking opportunities for cooperation with other actors. Applicants may receive up to SEK 500,000 (about EUR 47,000) and the maximum aid intensity is 80%. In this phase, it is common that the solution proposals, which were originally out of focus, begin to determine the main direction of the project. In the collaborative phase lasting approximately two years (partial) solutions identified in the previous phase are being developed and tested to a limited extent, e.g., in laboratories or testbeds. The maximum amount of support is limited to SEK 1,000,000 per project, up to 50% of the eligible costs. The implementation phase, which lasts about two years, focuses on the final solution testing, implementation and dissemination of results. Projects can apply for support in the range of SEK 5,000,000-20,000,000 and the maximum aid intensity of funding vary from 25 to 40%. (Vinnova 2019a; Vinnova 2019b)

Max 4 Lax Project

A brief example of a successful project is Max 4 Lax aimed at developing innovative housing alternatives for female pensioners. It was proposed by architectural firm Theory into practice in cooperation, among others, with 3D studio Walk the room and municipal public housing company AB Bostaden i Umeå (Arkitekten, 2019). Until now, the project has finished an initiation phase lasting from April to November 2019, in which obtained financing of SEK 497,565 (Vinnova, 2020). Nearly 30% of Sweden's retired women are, according to estimates, at risk of falling below the poverty line. Shared living is hence seen as a possible partial solution increasing the quality of housing and its accessibility with reasonable rent level, the maximum of SEK 4 000 a month. (Arkitekten, 2019) The project represents a creative form of collaboration as realistic and executable proposals were made within the project team through architectural planning of residential zone in the dwelling, organizing workshops and meetings with the target group (Vinnova, 2020; Lelková, 2020).

4. Conclusion

The paper dealt with the mission-oriented innovation policy and its features. This innovation policy is becoming increasingly important as it concerns crucial societal and environmental challenges. Currently, addressing these challenges is one of the main goals of EU research and innovation policy and will be essential for the forthcoming upcoming 9th Framework Programme Horizon Europe. The article discussed the basic features of the mission-oriented innovation policy. The most relevant of them are the directionality, intentionality and focus on specific objectives corresponding with societal challenges.

The paper presented two case studies of innovation policy initiatives strongly influenced by the mission-oriented approach. As the first case study, we have chosen the AAL programme, which has a significant European dimension and is focused on the ageing population. The second case study (Swedish Challenge-Driven Innovation programme) has rather a national dimension. More than 20 countries are involved in the first initiative that created more than 200 innovative solutions for older people. The second initiative aims at fostering the economic growth of Sweden in the light of social welfare and long-term sustainability. The program, administered by the Vinnova agency, has supported more than 1,100 individual projects during its existence. Both case studies have many common elements and fulfil most of the defined features of a mission-oriented approach and can serve as an inspiration for the countries of Central Europe, which do not have much experience with this approach.

Mission-oriented innovation policy is mentioned in particular in the context of developed countries in Western and Northern Europe. However, we believe that we could find examples of its implementation in Central Europe as well. That is a question for future research.

Similarly, further research should focus on the impact of mission-oriented innovation policy on the development of society.

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Regional Price Levels in the Districts of the Czech Republic: New Results

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Abstract

The aim of this contribution is to highlight the importance of the regional price levels within the member states of the European Union. On the case of the Czech Republic, authors show, how the assessment of NUTS2 (regions of cohesion) can be distorted by using a national price level (purchasing parity standard) instead of accounting for the regional price levels. The paper presents new data on the regional price levels in the districts of the Czech Republic for the period 2011–2017. Authors have processed raw data from extensive consumer-price surveys carried out by the Czech Statistical Office, supplemented them with data from several other sources, and regionalized them by an original approach certified by the Ministry of Regional Development of the Czech Republic. The results not only reflect regional differences in market prices of goods, services, housing and rentals, but they also enable to analyze the dynamics of their changes over the seven-year long period. The findings support the urge for a more accurate specification of economic and social disparities on a regional level leading to a local-people-centered regional development policy.

Keywords: EU cohesion policy, household expenditure, regional price level, Törnqvist Index

JEL Classification: E31, R11, R58

1. Introduction

In the European Union (EU), the policy of regional development has been targeted among others at sustainable development of regions and improving the citizen's quality of life (Terem et al., 2015). The regional convergence has been one of the key indicators and a large share of the EU budget (for the period 2014–2020 almost a third of the EU budget, i.e. €351.8 billions) is allocated for the cohesion policy (Rudenko and Didenko, 2016). The classification of regions (usually at the level of regions of cohesion NUTS 2) is based on comparison of the regional gross domestic product in so-called purchasing parity standard (Kyjónková, 2014). The purchasing parity standard is calculated by the Eurostat within the Eurostat-OECD International Comparison Program on the national level, but it does not account for the differences in price levels across the regions within one country (Čadil and Mazouch, 2011). Still, the regional price levels may represent a crucial factor when assessing the economic development of a region (Čadil et al., 2014).

The first attempts to measure the regional price levels in the Czech Republic have been carried out by Musil et al. (2012) and Čadil et al. (2014). Qualitatively superior approach to these first attempts has been introduced by Kocourek et al. (2016) and their research methods have been certified by the Ministry of Regional Development of the Czech Republic (Kraft et al., 2015). The aim of this contribution is to update and rectify the previous results using slightly more

advanced methods of calculation and data processing. The purpose of this paper is to introduce the new results of the regional price-level indexes (*RPI*) for the period 2011–2017 to a general public and provide them for use as an instrument of analysing the real standards of living in the Czech regions. Čadil et al. (2014) address the needs to use their regional price-level indicator to adjust the regional nominal gross domestic product, we, however, aim mainly at the regional households and their real socioeconomic status across the Czech districts (local administrative units, LAU 1).

The contribution is divided into three major parts: At first, briefly introduce the method of calculation of the *RPI* and also the method of estimation of the *RPI* for those Czech districts, where the primary data is not collected. In the second part, we present the results and comment on them. In the conclusion, we sum up our findings and point out suitable research areas of their use.

2. Research Method

The process of *RPI* construction was certified by the Ministry of Regional Development of the Czech Republic in December 2015 (Kraft et al., 2015) and its use in practice has been described in every detail in the article by Kocourek et al. (2016). A brief but important expert discussion followed publication of the article in “Statistika: Statistics and Economy Journal” (see mainly (Musil, 2017) and (Mrázek, 2017) for their comments) concluding the research method of quantification of the regional price levels introduced by Kocourek et al. (2016) yields more accurate and realistic results. This method is based on the Eurostat-OECD International Comparison Program methods (Eurostat, 2012). We first process all the raw data collected by the Czech Statistical Office during the consumer price index survey. For each of the years 2011–2017 about 650,000 prices have been collected (which makes up about 4.5 million prices over the six years). These data have been collected in 35 districts of the Czech Republic and in the Capital of Prague, which is why the price levels in the remaining 41 districts must be estimated.

The Czech consumer basket consists of nearly 700 price representatives, from which about 140 record either regionally constant prices (such as tobacco products, newspapers etc.), or their prices are collected centrally (such as water and sewer rates, electricity rates, housing prices, diesel and petrol prices etc.). Unfortunately, not all the collected prices can be used for calculation of regional price index. In different districts, there are surveyed qualitatively different varieties of a certain consumer-basket representative. Thus, we had to classify the data on approximately 560 price representatives into more than 4,600 qualitatively homogenous varieties (Eurostat, 2012). From these varieties, we chose for each price representative one characteristic variety which was most frequently surveyed across the districts. In those districts, where the price of the characteristic variety was not collected, we applied the bridging method (Eurostat, 2012) to estimate the price of the characteristic variety based on the prices of the non-characteristic varieties. Completing the price matrix for all regions and all characteristic varieties of the price representatives has made it possible to calculate the unweighted price parities:

$$p_A = \left(\prod_{k=1}^K P_{A,k} \right)^{1/K}, \quad (1)$$

where $P_{A,k}$ is the ratio of the price of the characteristic variety of the consumer basket representative in the region A to the price of the same variety in the k -th region (out of K regions, in this case $K = 36$), where $k = 1, 2, \dots, K$; p_A is the unweighted price parity of the region A at the level of a particular characteristic variety of a price representative (Kocourek et al. 2016).

In the next step, the geometric Laspeyres and Paasche price indexes have been calculated (Eurostat, 2012). The geometric Laspeyres index (2) is a weighted geometric mean of unweighted price parities p of a region A using the regionally specific weights of the region A . The Paasche geometric price index (3) is a weighted geometric mean of unweighted price parities p of a region A using the weights of the benchmark region B , in this case using the national weights.

$$P_A^{GL} = \prod_{n=1}^N (p_A)^{s_n^A}, \text{ where } \sum_{n=1}^N s_n^A = 1 \quad (2)$$

$$P_A^{GP} = \prod_{n=1}^N (p_A)^{s_n^B}, \text{ where } \sum_{n=1}^N s_n^B = 1 \quad (3)$$

where A is the particular region, B is the benchmark region (here characterized by an average regional expenditure structure corresponding to the national expenditure structure of the CPI in a particular year), P_A^{GL} is geometric Laspeyres index and P_A^{GP} is geometric Paasche index, p_A is the unweighted price parity of the region A on the level of a particular characteristic variety of the price representative, s_n is the share of a particular price representative n (from a basket of N representatives) on the total household expenditures (Kocourek et al. 2016).

The regional price level is calculated into the shape of an index number using the Törnqvist price index:

$$RPI_A = P_A^T = \sqrt{P_A^{GL} P_A^{GP}} \quad (4)$$

where RPI_A is Törnqvist regional price-level index for a region A .

The properties of the RPI (transitivity, multilaterality, and superlativity) make it possible to recalculate its values to the level of region NUTS 3 and cohesion region NUTS 2 as a geometric weighted average of district (LAU 1) indexes, where the weight is the proportion of the particular LAU 1 total household expenditures on the total household expenditures in the corresponding NUTS 3 or NUTS 2 region (Kocourek et al. 2016).

Since the coverage of regions (NUTS 3 or NUTS 2) by the price surveys of the Czech Statistical Office is rather uneven, it was necessary to estimate the price levels of the remaining districts. We followed a procedure similar to Roos (2006), but estimated the partial regional price levels for each of the twelve CZ-COICOP Headings (RPI_{COI}) of the consumer basket. Since we have processed data on 36 districts in six subsequent years, we were able to apply the panel data analysis for estimation of the RPI s in the remaining 41 districts of the Czech Republic. We set the cross-section effects to random [$CX=R$] to account for different starting situations of different districts and the period effects to random [$PER=R$] to allow for different dynamics over the time.

All the regressors were transformed similarly to (1), only here, the number of all the districts in the Czech Republic ($K = 77$, including the Capital of Prague) was used. This procedure assures the mean value of all the districts of the Czech Republic equals 1 and each regressor represents an index value indicating the regional difference of a particular district from the national average. Through this procedure the undesirable trend has been removed from all the variables and the stationarity of the data has been assured. The statistical significance of all the parameters was verified against the 95% confidence level by t -test and all the model equations have passed the F -test at the same confidence level.

The statistically significant regressors for the estimation are listed below:

- BU_A share of business units in agriculture and forestry;
- BU_I share of business units in accommodation and food service activities;
- BU_R share of business units in culture, entertainment, and recreational activities;

<i>BU_{ind}</i>	number of individual business units per 1,000 inhabitants;
<i>DENS</i>	population density per 1 ha of built-up area;
<i>HPI</i>	average house price index (composite index of prices of flats and family houses sold in a particular year in a particular district);
<i>INC</i>	average wage per full-time equivalent employee;
<i>PHYS</i>	number of physicians per 100 000 inhabitants;
<i>POP₁₅₋₆₀</i>	share of economically active population;
<i>POP_{<5,000}</i>	share of population living in municipalities with less than 5,000 inhabitants;
<i>POP_{dis}</i>	share of population living in the district city;
<i>ROAD_{1st}</i>	length of the 1 st class roads per 10,000 inhabitants;
<i>ROAD_{high}</i>	length of the highways per 10,000 inhabitants;
<i>UNEMP</i>	share of unemployed persons on economically active population.

The model equations for estimation of the partial *RPI* for the twelve main headings of the consumer basket are summed up by the following set of equations (5) – (16):

$$RPI_{COI01} = 0.9316 + \frac{[CX=R]}{[PER=R]} - 0.0151 \times BU_A - 0.0206 \times DENS + 0.1083 \times INC \quad (5)$$

$$RPI_{COI02} = 0.9807 + \frac{[CX=R]}{[PER=R]} + 0.0355 \times BU_{ind} - 0.0165 \times BU_I \quad (6)$$

$$RPI_{COI03} = 0.8321 + \frac{[CX=R]}{[PER=R]} + 0.1015 \times BU_{ind} + 0.0656 \times INC \quad (7)$$

$$RPI_{COI04} = 0.7469 + \frac{[CX=R]}{[PER=R]} + 0.2804 \times HPI - 0.0423 \times UNEMP \quad (8)$$

$$RPI_{COI05} = 0.9333 + \frac{[CX=R]}{[PER=R]} + 0.0425 \times INC + 0.0217 \times ROAD_{1st} \quad (9)$$

$$RPI_{COI06} = 1.3015 + \frac{[CX=R]}{[PER=R]} + 0.0990 \times INC - 0.0104 \times PHYS - 0.3883 \times POP_{15-60} \quad (10)$$

$$RPI_{COI07} = 0.9233 + \frac{[CX=R]}{[PER=R]} + 0.0767 \times INC \quad (11)$$

$$RPI_{COI08} = 0.9638 + \frac{[CX=R]}{[PER=R]} - 0.0097 \times DENS + 0.0249 \times INC - 0.0154 \times POP_{<5,000} \quad (12)$$

$$RPI_{COI09} = 0.5124 + \frac{[CX=R]}{[PER=R]} + 0.0703 \times BU_R + 0.4141 \times POP_{15-60} \quad (13)$$

$$RPI_{COI10} = 0.6401 + \frac{[CX=R]}{[PER=R]} + 0.2661 \times INC + 0.0781 \times POP_{dis} \quad (14)$$

$$RPI_{COI11} = 0.7825 + \frac{[CX=R]}{[PER=R]} + 0.2232 \times INC - 0.0093 \times ROAD_{high} \quad (15)$$

$$RPI_{COI12} = 0.9568 + \frac{[CX=R]}{[PER=R]} + 0.0371 \times DENS - 0.0040 \times ROAD_{high} \quad (16)$$

where the structure of the main headings of the consumer basket is following:

COI01: Food and non-alcoholic beverages;

COI02: Alcoholic beverages and tobacco;

COI03: Clothing and footwear;

COI04: Housing, water, electricity, gas and other fuels;

COI05: Furnishings, household equipment, and routine household maintenance;

COI06: Health;

COI07: Transport;

COI08: Communications;

COI09: Recreation and culture;

COI10: Education;

COI11: Restaurants and hotels;

COI12: Miscellaneous goods and services.

The negative sign at the BU_A indicates a higher competition of business units in agriculture and forestry leads to lower prices of COI01 (food and non-alcoholic beverages). The same applies also for BU_I , suggesting that districts with a stronger sector of accommodation and catering tend to have lower price of COI02 (alcoholic beverages and tobacco). On the other hand, the positive signs at the BU_R and also at BU_{ind} suggest, that a larger choice of suppliers in the culture, entertainment, and recreational activities but also a generally larger number of entrepreneurs in a district, are a sign of higher demand leading to generally higher prices of COI02 (alcoholic beverages and tobacco) and of COI03 (clothing and footwear). The role of specific density of population ($DENS$) varies for different headings: while for COI01 (food and non-alcoholic beverages) and for COI08 (communications) the regions with lower density recorded higher prices, for COI12 (miscellaneous goods and services) quite the opposite can be concluded, which is probably a demonstration of an agglomeration effect (Kurt and Andreas, 2008). The higher values of average house price index (HPI) are naturally correlated with generally higher prices of COI04 (housing, water, electricity, gas and other fuels). Also, higher wages (INC) tend to push prices up, which accounts for clothing and footwear (COI03), furnishings and household equipment (COI05), and most of the services, such as health (COI06), transport (COI07), communication (COI08), education (COI10), and restaurants and hotels (COI11). It is no surprise, the number of physicians is negatively correlated with the prices of health care (COI06), although health care is not a typical market environment. The share of economically active population (POP_{15-60}) has a negative effect on prices of health care (COI06), but a positive one on the prices of recreational and cultural services (COI09). The higher shares of people living in small municipalities ($POP_{<5,000}$) are pulling the prices of communication (COI08) down, while the higher shares of people living in the district city (POP_{dis}) are pushing the prices of education (COI10) up. The districts with a larger length of the 1st class roads ($ROAD_{1st}$) tend record higher prices of furnishing, household equipment and routine household services (COI05), while the districts with a longer network of highways ($ROAD_{high}$) show lower prices in restaurants and hotels and also more affordable prices in the heading COI12 (miscellaneous goods and services). Unemployment ($UNEMP$) is a significant factor only for prices of housing (COI04), where obviously the districts with higher rates of unemployment tend to have lower prices for housing, water, electricity, gas, and other fuels.

Following this research method, we calculated the regional price levels in each year of the period 2011–2017, but for a higher robustness of our results, we are publishing the three-year moving averages. The mean value for the whole country equals 1 in each of the periods.

3. Results

We must emphasize, the price levels in the Czech Republic have never before been analysed in such a geographical detail (at the level of districts) and in such a long, continuous time series. The results for the three levels of geographical detail have been summed up in the following three tables (Table 1, Table 2 and Table 3). The map in the Figure 1 shows the most up-to-date results coming from the years 2015-2017.

This approach and its results make it possible to analyse the changes in the differences of price-level indexes over the time unbiased by overall changes in prices (inflation). Exactly for this purpose, we calculated the standard deviations for each heading of the consumer basket and in each period of time. The standard deviation rose from 0.0382 in 2011-2013 to 0.0424 in 2015-2017, which indicates a slight increase in the differences in regional price levels across the districts of the Czech Republic confirming rising differences in price levels across the country (i.e. regional price divergence).

Table 1: Regional Price-level Index in the Districts of the Czech Republic

District	LAU 1	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017
Benešov	CZ0201	1.0223	1.0233	1.0239	1.0212	1.0163
Beroun	CZ0202	1.0436	1.0438	1.0424	1.0374	1.0353
Blansko	CZ0641	1.0008	1.0064	1.0145	1.0160	1.0158
Brno-město	CZ0642	1.0906	1.0923	1.0943	1.0959	1.0977
Brno-venkov	CZ0643	1.0263	1.0289	1.0297	1.0304	1.0309
Bruntál	CZ0801	0.9376	0.9322	0.9241	0.9209	0.9169
Břeclav	CZ0644	0.9894	0.9929	0.9967	1.0027	1.0034
Česká Lípa	CZ0511	0.9836	0.9818	0.9797	0.9801	0.9809
České Budějovice	CZ0311	1.0266	1.0240	1.0297	1.0337	1.0407
Český Krumlov	CZ0312	0.9784	0.9795	0.9793	0.9785	0.9790
Děčín	CZ0421	0.9927	0.9918	0.9904	0.9892	0.9860
Domažlice	CZ0321	0.9785	0.9790	0.9807	0.9807	0.9779
Frydek-Místek	CZ0802	0.9981	0.9978	0.9968	0.9974	0.9970
Havlíčkův Brod	CZ0631	0.9785	0.9809	0.9829	0.9818	0.9812
Hodonín	CZ0645	0.9925	0.9995	1.0066	1.0105	1.0192
Hradec Králové	CZ0521	1.0556	1.0574	1.0624	1.0652	1.0671
Cheb	CZ0411	0.9701	0.9710	0.9669	0.9686	0.9678
Chomutov	CZ0422	0.9472	0.9461	0.9441	0.9430	0.9437
Chrudim	CZ0531	0.9768	0.9779	0.9752	0.9711	0.9639
Jablonec nad Nisou	CZ0512	1.0015	0.9998	1.0005	1.0005	1.0058
Jeseník	CZ0711	0.9689	0.9669	0.9630	0.9592	0.9594
Jičín	CZ0522	1.0084	1.0071	1.0083	1.0111	1.0115
Jihlava	CZ0632	0.9854	0.9914	0.9977	1.0020	0.9994
Jindřichův Hradec	CZ0313	0.9772	0.9746	0.9739	0.9722	0.9744
Karlovy Vary	CZ0412	0.9946	0.9860	0.9802	0.9805	0.9820
Karviná	CZ0803	0.9748	0.9754	0.9695	0.9625	0.9576
Kladno	CZ0203	1.0457	1.0418	1.0415	1.0423	1.0463
Klatovy	CZ0322	0.9590	0.9554	0.9563	0.9556	0.9553
Kolín	CZ0204	1.0387	1.0373	1.0374	1.0372	1.0325
Kroměříž	CZ0721	0.9934	0.9929	0.9923	0.9924	0.9916
Kutná Hora	CZ0205	1.0170	1.0143	1.0135	1.0148	1.0118
Liberec	CZ0513	1.0426	1.0450	1.0463	1.0510	1.0508
Litoměřice	CZ0423	0.9923	0.9909	0.9920	0.9929	0.9919
Louny	CZ0424	0.9705	0.9704	0.9691	0.9663	0.9650
Mělník	CZ0206	1.0381	1.0333	1.0284	1.0257	1.0269
Mladá Boleslav	CZ0207	1.0269	1.0309	1.0349	1.0374	1.0392
Most	CZ0425	0.9429	0.9402	0.9385	0.9368	0.9351
Náchod	CZ0523	0.9826	0.9884	0.9828	0.9805	0.9744
Nový Jičín	CZ0804	0.9787	0.9801	0.9785	0.9831	0.9794
Nymburk	CZ0208	1.0223	1.0211	1.0235	1.0206	1.0200
Olomouc	CZ0712	1.0082	1.0101	1.0151	1.0152	1.0167
Opava	CZ0805	1.0085	1.0052	1.0019	0.9985	1.0002
Ostrava-město	CZ0806	1.0059	1.0059	1.0015	1.0015	1.0031
Pardubice	CZ0532	1.0454	1.0518	1.0579	1.0590	1.0548
Pelhřimov	CZ0633	0.9836	0.9846	0.9877	0.9921	0.9965
Písek	CZ0314	0.9923	0.9935	0.9945	0.9939	0.9906
Plzeň-jih	CZ0324	0.9948	0.9936	0.9946	0.9966	0.9965
Plzeň-město	CZ0323	1.0374	1.0397	1.0426	1.0471	1.0516
Plzeň-sever	CZ0325	1.0026	1.0009	0.9998	0.9997	1.0014
Praha	CZ0100	1.1714	1.1754	1.1869	1.1919	1.1960

Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

Table 1: Regional Price-level Index in the Districts of the Czech Republic (continued)

District	LAU 1	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017
Praha-východ	CZ0209	1.1022	1.1076	1.1087	1.1136	1.1123
Praha-západ	CZ020A	1.1227	1.1242	1.1240	1.1247	1.1198
Prachatice	CZ0315	0.9725	0.9738	0.9756	0.9779	0.9751
Prostějov	CZ0713	0.9927	0.9929	0.9947	0.9968	0.9995
Přerov	CZ0714	0.9888	0.9903	0.9863	0.9860	0.9814
Příbram	CZ020B	1.0277	1.0179	1.0112	1.0054	1.0050
Rakovník	CZ020C	1.0023	1.0038	0.9994	0.9960	0.9959
Rokycany	CZ0326	1.0101	1.0086	1.0056	1.0007	1.0002
Rychnov nad Kněžnou	CZ0524	0.9985	0.9977	0.9983	0.9969	1.0017
Semily	CZ0514	1.0082	1.0103	1.0109	1.0057	1.0014
Sokolov	CZ0413	0.9625	0.9583	0.9547	0.9512	0.9517
Strakonice	CZ0316	0.9768	0.9722	0.9755	0.9780	0.9768
Svitavy	CZ0533	0.9779	0.9794	0.9804	0.9781	0.9771
Šumperk	CZ0715	0.9697	0.9721	0.9726	0.9732	0.9724
Tábor	CZ0317	1.0001	1.0016	1.0056	1.0042	1.0023
Tachov	CZ0327	0.9627	0.9644	0.9665	0.9700	0.9732
Teplice	CZ0426	0.9992	0.9914	0.9777	0.9676	0.9664
Trutnov	CZ0525	0.9928	0.9904	0.9906	0.9912	0.9914
Třebíč	CZ0634	0.9764	0.9772	0.9793	0.9790	0.9811
Uherské Hradiště	CZ0722	1.0144	1.0222	1.0338	1.0403	1.0363
Ústí nad Labem	CZ0427	0.9720	0.9687	0.9669	0.9640	0.9675
Ústí nad Orlicí	CZ0534	0.9861	0.9858	0.9845	0.9848	0.9850
Vsetín	CZ0723	1.0013	1.0027	1.0043	1.0040	1.0070
Vyškov	CZ0646	1.0038	1.0070	1.0091	1.0114	1.0079
Zlín	CZ0724	1.0370	1.0395	1.0422	1.0421	1.0394
Znojmo	CZ0647	0.9808	0.9810	0.9819	0.9834	0.9871
Žďár nad Sázavou	CZ0635	0.9665	0.9697	0.9729	0.9749	0.9757

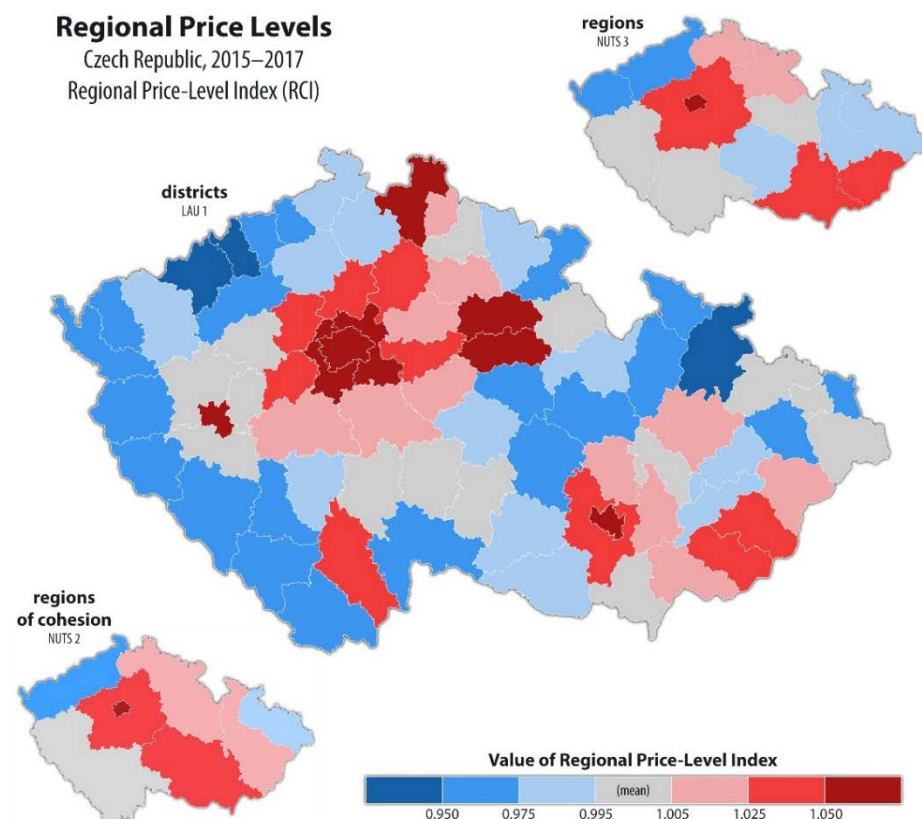
Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

Since we analysed the consumer basket structured down into twelve main headings, we could also show, how each of these headings contributed to the total standard deviation and also how the standard deviation changed in these twelve headings over the time. Our results indicate a price convergence in the districts of the Czech Republic for prices of transport (COI07), communication (COI08), prices of restaurants and hotels (COI11) and also miscellaneous goods and services (COI12). Their average share on the household expenditures is nearly 26 %. All the remaining headings of the consumer basket (constituting the remaining 74 % of household expenditures) show price divergence over the analysed time span. Thus, the regional differences in price levels in the Czech Republic slowly increase over the time. This phenomenon has been illustrated in the Figure 2.

The largest share of the total standard deviation can be attributed to the headings COI04 (Housing, water, electricity, gas and other fuels) and COI10 (Education). In both of these headings, their respective standard deviations fluctuated from 0.0938 to 0.1175, while all other headings recorded the standard deviation smaller than 0.0574. These two headings alone make up to 27 % of the household expenditures and thus, the majority of differences in price levels among the districts of the Czech Republic is a consequence of differences in prices of housing, water, electricity, gas and other fuels, and in prices of education. The position of these two headings in the consumer basket is rather unique, as they both represent more an investment than a consumption. The applied certified method of calculation of the regional price-level indexes (Kraft et al., 2015) deviates in this respect from the standard consumer price index and

purchasing parity standard. But for this particular reason, our results provide superior measure of regional price levels reflecting the real differences in cost of living in different districts.

Figure 1: Regional Price Levels in the Czech Republic in the Period 2015-2017



Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

Table 2: Regional Price-level Index in the Regions of the Czech Republic (NUTS 3)

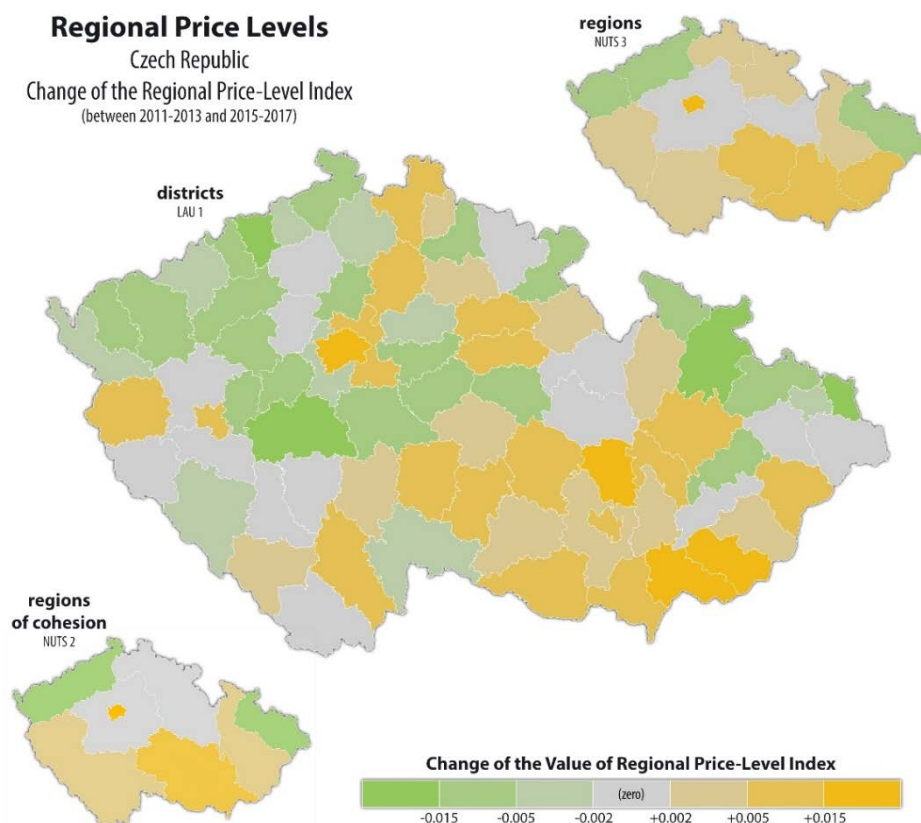
Region	NUTS 3	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017
Capital of Prague	CZ010	1.1714	1.1754	1.1869	1.1919	1.1960
Středočeský kraj	CZ020	1.0479	1.0474	1.0471	1.0468	1.0461
Jihočeský kraj	CZ031	0.9965	0.9955	0.9983	0.9994	1.0008
Plzeňský kraj	CZ032	1.0004	1.0004	1.0016	1.0032	1.0048
Karlovarský kraj	CZ041	0.9771	0.9728	0.9682	0.9677	0.9682
Ústecký kraj	CZ042	0.9741	0.9716	0.9685	0.9657	0.9652
Liberecký kraj	CZ051	1.0141	1.0146	1.0149	1.0159	1.0164
Královéhradecký kraj	CZ052	1.0118	1.0127	1.0133	1.0139	1.0141
Pardubický kraj	CZ053	1.0012	1.0037	1.0049	1.0042	1.0013
Kraj Vysočina	CZ063	0.9774	0.9802	0.9836	0.9854	0.9860
Jihomoravský kraj	CZ064	1.0297	1.0328	1.0359	1.0382	1.0401
Olomoucký kraj	CZ071	0.9914	0.9929	0.9940	0.9942	0.9942
Zlínský kraj	CZ072	1.0146	1.0175	1.0215	1.0230	1.0218
Moravskoslezský kraj	CZ080	0.9893	0.9887	0.9848	0.9833	0.9821

Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

Table 3: Regional Price-level Index in the Czech Regions of Cohesion (NUTS 2)

Cohesion regions	NUTS2	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017
Prague	CZ01	1.1714	1.1754	1.1869	1.1919	1.1960
Central Bohemia	CZ02	1.0479	1.0474	1.0471	1.0468	1.0461
South-West	CZ03	0.9983	0.9978	0.9999	1.0012	1.0027
North-West	CZ04	0.9749	0.9719	0.9684	0.9663	0.9660
North-East	CZ05	1.0088	1.0101	1.0109	1.0111	1.0103
South-East	CZ06	1.0134	1.0165	1.0197	1.0218	1.0234
Central Moravia	CZ07	1.0025	1.0046	1.0071	1.0080	1.0074
Moravia-Silesia	CZ08	0.9893	0.9887	0.9848	0.9833	0.9821

Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

Figure 1: Change of the Regional Price Levels in the Czech Republic

Source: author's calculations based on (Kraft et al., 2015) using data from (CzSO, 2020)

What is more important than a mere convergence or divergence in regional price levels is the fact, how the regional differences increase with the geographical detail and how the seemingly homogenous regions of cohesion can consist of a variety of very different districts (see e.g. South-East consisting of Kraj Vysočina and Jihomoravský kraj). Thus, it is really important to focus the policies of regional development on as small local administrative units as possible. Only by doing so, the regional development policies will be capable to help the inhabitants of

these areas and foster the convergence of their living standards throughout the European Union.

4. Conclusion

The price levels in the Czech Republic have never before been analysed in such a geographical detail (at the level of districts) and in such a long, continuous time series. In fact, most researchers – incl. (Roos, 2006) and others – expect the dynamics of the regional price levels to be very small over the time. Indeed, our results for most of the headings of the consumer basket and for most of the districts show no significant change in the standard deviation of the *RPI* over the time. The changes of the regional price levels are rather low (the change of the *RPI* between the period 2011-2013 and the period 2015-2017 was larger than ± 0.5 percentage point only in 34 out of 77 districts of the Czech Republic). Still, the differences in price levels even among different NUTS 2 reach up to 25 percentage points. That is quite a huge difference to be omitted when deciding on the level of development and also on the level of support from the EU cohesion policy funds.

This contribution and the data published do not only point out an important shortcoming of the European cohesion policy. The main aim of this article is to provide a better understanding of the real socioeconomic differences among people living in different localities of the Czech Republic. We are currently working on even more detailed map of regional price levels which – combined with the detailed map of regional income levels – will make it possible to measure standard of living of an average person of any municipality of the Czech Republic. Such an indicator will provide an ultimate measure for all stakeholders of the regional development, a measure, that has never been available before.

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The Robotics Implementation Issue within the EU Tourism Sector Development

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Abstract

Industry 4.0 implies the implementation of innovation across all economic sectors from manufacturing via services to public administration. At the same time, it represents the resource efficiency, cost reduction as well as it eliminates the need for personal contact with product, customer or staff department, and almost all actions are being transferred to the Internet and technology areas. Tourism is one of the most dynamically developing sectors in world economy and, even in terms of European Union, it already represents a promising economic sector, even though its potential development has not been sufficiently exploited yet. Based on analysis of ongoing processes of automation, robotics being implemented into EU tourism sector the goal of the paper is to figure out the impact of Industry 4.0 elements on the further EU economy development within the European labor market processes. The emphasis is focused on creating sustainable jobs in EU tourism, making it the driving force of EU economy, and revealing the hidden tourism potential as a prerequisite for economic and social development in EU.

Keywords: automation and robotics, EU economy policies, industry 4.0, job creation and job loss, new technologies implementation.

JEL Classification: F63, O31, O51

1. Introduction

For several years, the EU economic policy has been dealing with the start of the Fourth Industrial Revolution, which is fundamentally changing the nature of many sectors through industry, trade, logistics and also tourism. In addition to social functions, tourism also meets a very important economic functions, namely by promoting entrepreneurship, creating new jobs, or stimulating the development of crafts, etc. According to Miklosik, Kuchta, Zak (2018b) and Lipkova, Hovorkova (2018) Industry 4.0 is a present time phenomenon, and there are many discourses on its impact on jobs and the possible extinction of some jobs being relatively easily replaceable by robots. As a result of information technology and robotics, the tourism industry is fundamentally changing and technological innovations along with the implementation of robotics within the Industry 4.0 concept have an impact on the consumer behavior of tourism participants. Regarding job positions replaced by robots linked by digitization to systems, they will be especially those where no special qualification is needed. Miklosik, et al. (2019) and Haviernikova, Jaskova, Krajnakova (2016) affirm that for example, workers' positions in production are at risk, on the other hand, professional job positions will be much more important, and there will certainly be more new jobs created for the development and controlling of new robots and systems, but the number of new created jobs will be significantly

lower. Fojtikova, Stanickova (2017) and Tupa, Vojtovic, Strunz (2019) declare that the main principle of robotics and production digitization is to reduce costs and increase productivity and efficiency, thus a company will have to be forced to invest in Industry 4.0 and be sure of return on investment. On the other hand, Mura, Haviernikova, Machova (2017) dispute that there will be a demand for a highly skilled workforce, especially in digital skills, informatics and programming. These demands on labor market will set new needs to change the education system. However, the Industry 4.0 concept extends far beyond the manufacturing and processing area, hence there are the application of fourth industrial revolution elements in tourism industry already in action.

This paper will draw attention to the significance of automation, digitization and robotics due to the implementation of Industry 4.0 concept in tourism in terms of new jobs creation and old jobs loss. That's why the goal of the paper is, based on an analysis of the synergies of tourism industry in EU economy and Industry 4.0, to figure out the contribution of Industry 4.0 aspects implementation in tourism to the socio-economic development of EU economy. Within the stated objective the outline of the paper is as follows. Current trends in tourism, its importance in the EU and world economy in the context of Industry 4.0 concept, globalization and sustainable development, as well as the significance of international tourism within GDP and employment within the GDP per capita employed indicator will be analyzed and compared among the main world economies and Slovakia. In addition to the need to create new jobs, the effects and benefits and what the European economies should focused on in order to eliminate the negative aspects of old jobs loss in tourism sector will also be discussed and illustrated on the example of robotics implementation in Slovak hotel business.

2. Literature Review

This chapter will deal with tourism as a EU economy sector, its significant role in current EU economy, with tourism in the context of globalization and sustainable development, as well as with the main characteristics of Industry 4.0 concept, its current challenges and basic elements such as automation, digitization and robotics.

According to Harakal'ova (2018) international tourism is directly influenced by the world economy development, not only in terms of growth rate, but also the main source markets distribution. The European Union aims at a competitive economy capable of economic growth. Cernohlavkova, et al. (2013), Cihelkova (2016) and Jirankova, et al. (2015) argue that a crucial role in this process is attributed to small and medium sized enterprises (SMEs) that have the potential to create employment opportunities; and they are significantly involved in tourism activities. That is why the European Union seeks to support them, facilitates the entry of their new businesses into the market, promotes their existing activities, and puts pressure on cutting bureaucracy (Baculakova, Harakalova, 2017). Today, tourism is one of the most important sectors of the EU economy. Its share in raising the standard of living of the population is gradually becoming an integral part of consumption and like other sectors, it must respond to new trends (Zak, Hrcakova, 2014).

Entities involved in tourism enter into interrelationships and ties, which may be of an economic or non-economic (for example political) nature. Tourism revenues form a significant part of national budget revenues. Tourism significantly affects the world economy within the economic benefits and GDP growth is the most important indicator (Muller, 2006; Varadin, 2016; Sadilek, Zadrazilova, 2015). The second basic indicator regarding the significance of tourism in the economy is its impact on employment. Employment in tourism sector accounts for a significant proportion, with tourism in the European Union being the most significant in Spain, Italy, France, Germany and the United Kingdom (Ivanová, Masárová, 2018; Kana,

Mynarzova, 2016; Taušer, Čajka, 2014). Authors such as Jiroudkova, Rovna (2015) and Helisek (2015) are also convinced of the growing significance of tourism in EU economy as well as the development of new jobs, ranking the tourism industry among the most important sectors in international economics. Many authors such as Miklosik, Kuchta, Zak (2018a) and Svarc, Grmelova (2015) argue that important indicators of tourism are mainly the impact on the balance of payments of a country, the development of employment, including the possibility of creating new jobs, as well as the positive impact on economic and social development of particular regions.

Industry 4.0 is the designation for the so-called Fourth industrial revolution. It represents the current trend of digitization and the related process of automating production and robotics reflecting in labor market changes being one of the priorities for the development of countries in the European Union (Kreckova, Odehnalova, Reardon, 2016). Industry 4.0 is a technological revolution that fundamentally changes the way people live, work and communicate. The digital revolution is characterized by the merging of technologies, blurring the boundaries between the physical, digital and biological spheres. Compared to previous industrial revolutions, the main features of Industry 4.0 are the speed of development, the scale and impact of those systems. Machkova, Sato, (2017) affirm that the main idea of Industry 4.0 is to assume productivity growth, reduce production demands, optimize logistics and so on. It reflects social change caused by the interconnection of physical and virtual worlds.

According to Gärtner, Sadílek, Zadražilová (2017) and Malec, Abrahm (2016) today, we are at the threshold of the Fourth Industrial Revolution bringing major changes, especially in production, where robots, digitization and automation are implemented. These changes can have major impacts on labor market. Automation, digitization and robotics are booming. They change the functioning not only of industry and production, but also of the whole society. Until now, the machines were self-sufficient, they needed a human being to be controlled and operated. Today, however, machines are able to produce the desired product independently according to the specified parameters, they know when get fixed, stopped their operation when on a danger, they can even communicate not only with people but also with each other (Sadílek, Zadrzilova, 2016; Tajtakova, Zak, Filo, 2019). According to De Castro, Vlčková, Hnát (2017) Industry 4.0 will lead to an economy with highly automated and flexible production that is fully interconnected. Ubiquitous automation and digitization will dramatically change the nature of labor forces' involvement in the workflow. Baculakova (2018) contends that Industry 4.0 offers new tools for intelligent production process management, logistics, energy management, information. It is not only about technology, it means a fundamental change in the content of business, in communication with the market, a complete change in the internal functioning of a company, a change in jobs, education and development, etc.

3. Problem Formulation and Methodology

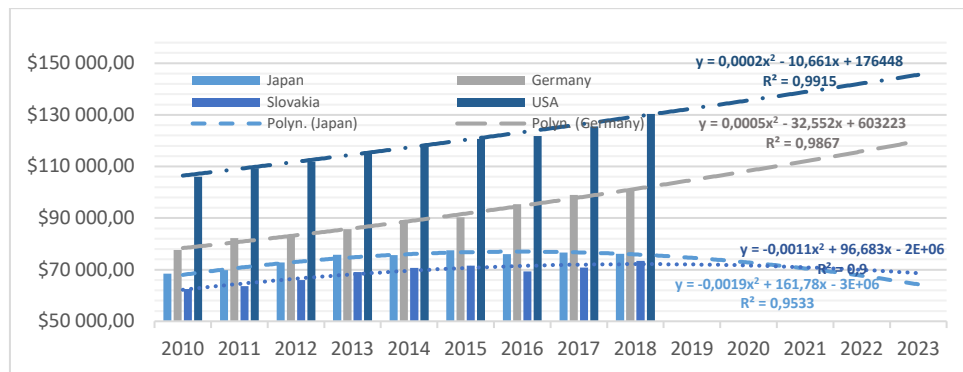
This paper will handle the problematic aspects regarding the economic and social issues within the EU tourism sector covering the Industry 4.0 implementation processes in international economics. To put in other words, the main goal of this paper is by means of analysis, comparative analysis methods followed by logical deduction to figure out the potential benefits for world economy development coming out of Industry 4.0 aspects being implemented in EU tourism sector. The issue is to figure out whether and to what measure the robotics, new technologies might affect the new job creation along with the labor force adaptability to it. The basic data come from widely recognized and reputable institutions in assessing the GDP per capita employed indicator of particular economies such as the World Trade organization on

Tourism (UNWTO), the OECD, European Commission and many others. For the most objective assessment of the changes being awaited by Slovak tourism industry and hotel business due to the implementation of Industry 4.0, the structured interview has been chosen as the basic research method the hotel managers were approached by. According to Kreckova, Zadrazilova and Rezankova (2016) this method is also known as a standardized interview or a researcher-administered survey and is defined as a qualitative research method commonly employed in survey with developed an interview schedule which lists the wording and sequencing of questions. The way how robotics is being implemented in hotel business, the particular example is to be illustrated on the Hotel Elizabeth in Trenčín, Slovakia by means of the structured interview as the principal scientific method, the hotel managers were inquired by in November 2019.

4. Findings and Discussion

In line with the Strategy for the Development of Artificial Intelligence of April 2018, a joint plan is foreseen to better coordinate investments, which should lead to deeper synergies between productivity and robotics. By the end of 2020, at least 20 billion EUR will be earmarked for artificial intelligence research and innovation, and more than 20 billion EUR per year in the next decade from public and private investment. National investment will be complemented by Commission in the sum of €1.5 mld. by 2020, 70% more than in 2014-2017 period. Regarding the future long-term EU budget (2021-2027), the Commission proposes to invest at least EUR 7 mld. EUR in this area from Horizon Europe and the Digital Europe Program (UNWTO, 2019; WEFORUM, 2019; European Commission, 2019).

Figure 1: GDP Per Person Employed in USD, Current Price, Current PPPs



Source: own processing by OECD (2020)

Generally speaking, the robotics process implementation, the level of labor productivity and the level of investment in artificial intelligence in the EU are very low compared to the US. To compare the labor productivity development in Slovak Republic we present the labor productivity development in the USA, Japan and Germany. The development is shown in Figure no. 1, in which, on the basis of the linear trend GDP per capita employed indicator links; it is evident that labor productivity has increased in all countries, but at different growth rates. From the Figure no. 1 it can be seen that the lowest labor productivity is registered in Slovak Republic, which, compared to the USA, Germany and Japan, had the lowest labor productivity, but as it did in the USA and Germany, it had an increasing character throughout the observed period. The average labor productivity per capita in Slovakia was 60,211.57

thousand EUR, in the USA it was 109,669.27 thousand EUR, in Japan 71,491.63 thousand EUR, in Germany it was 88,096.81 thousand EUR. As the chart in Figure 1 shows, the average labor productivity in each country indicates that the best results are achieved by the USA, then by Germany and Japan. Among the surveyed countries, Slovak Republic has currently the worst values, however the prediction says that the lookout trend is supposed to be improving in contrast with Japan economy declining in the next decades.

As a success story of robotics implementation into the hotel industry the following example can be illustrated. The Trenčín hotel “employed” the first robot in Slovakia. It works at the reception as the first robot on a Slovak hotel scene. Artificial, shiny white humanoid helps guests at the Elizabeth Hotel in Trenčín with orientation. The Heritage Hotels of Europe hotel organization, the Hotel Elizabeth in Trenčín belongs to, does not want to release people in the future, but robots should relieve hotel staff from routine administration. The robot is one-meter-high, weighs 28 kilograms and is called Mark. The robot with a display on its chest moves its head, shoulders, elbows, wrist, five fingers and knee and is currently tirelessly skating around the reception in Elizabeth Hotel in Trenčín. It is not as fast as the staff is, is able to travel three kilometers per hour, but it still helps employees. The Mark robot is social and constantly acquainted with new things and is learning other skills. Its task is to advise guests with minor questions. They can get a piece of advice on how to navigate within the hotel, it offers tourist advice and information about the location or services of the hotel. In the future the robot should also be able to accommodate guests. According to the Elizabeth Hotel manager, Mark speaks English, it should be able to speak Slovak and other languages by the end of the year of 2020. Mark is incorporated by four microphones, two HD cameras, a 3D sensor, touch sensors especially on hands and feet and three buffer sensors. Heritage Hotels of Europe chain is one of the leading innovators in hotel business. Since January 2019, it has been receiving bitcoins in all its facilities and is also preparing for opening the doors by cell phones instead of cardkeys. Charging stations for electric cars are being built by the hotels. About half a milliard EUR will be invested into the improvement of rooms interior, technology, but also staff training. Soon guests will be able to open rooms not using keys but smart phones.

The international hotel chain Heritage Hotels of Europe will deploy the recently introduced robot to all its hotels in Hungary, Austria, Italy, Croatia, Slovenia. The Elizabeth Trenčín Hotel in Slovakia was the first within this chain where the robot was implemented. In addition to consulting the services to guests, the robot will hand over the mobile key to guests to open their room. Mark will also be entrusted with the check-in service area. The robot was made in France and is supported by Adastra Inc. It does not know how to learn; it is necessary to program it. Any robot cannot replace human empathy and emotions. Today, however, hotel staff does a lot of transactional tasks that can be replaced by artificial intelligence. The robot can save time for staff on guests to be able to provide a more personalized experience. According to the director of Elizabeth Hotel in Trenčín, for the hospitality segment, robots will present a similar revolution to the Internet as some 20 years ago when the first website was created. Meanwhile, Mark is able to give an advice on restaurants in the city or hotel services and some of the guests take it as an element of amusement; they take selfie; have jokes or dance with it.

Robots working as assistants can be found in various hotels, but these are usually things like luggage storage, check-in, and so on. A concierge robot that welcomes guests and provides a variety of information is unique. The advantages of this technology include cost savings and elimination of human error. As disadvantages there can be mentioned such as unnaturalness, the loss of personal contact, including the inability to perceive non-verbal communication of the customer, the need for truly reliable technology and the cost of procuring technology.

5. Conclusion

We have arrived to the conclusion that, the impact of Industry 4.0 on tourism can already be observed. There will certainly be changes regarding the labor market in the future; Nevertheless, the nature of tourism implies that threats to specific job positions will not be as high as in other sectors, such as manufacturing. In this paper we have shown that due to technological and institutional changes taking place in the EU economy, the labor market structure is also changing. Digitization, robotics, artificial intelligence, shared economy development and other breakthrough changes are reflected in both the qualitative and quantitative structure of labor demand. Automation and robotics is no longer a remote reality. Probably also in the area of tourism will gradually decrease the processes that require human resources. Such services will then be more stable, more accurate and more reliable, with the result that this trend will benefit both the customer and the providers. Finally, we can summarize that automation quickly changes the world - robots take jobs for people, the job market and the way how people spend their free time is to be changed. Some countries are better prepared for the initiation of robots and artificial intelligence, others worse. Robotics technology will play an important role in the next decade, it will affect every aspect of work, it has the potential to transform lives and workflows, increase efficiency, safety and service delivery, and create jobs. Its impact will grow over time, as will the interaction between robots and humans. To broaden this topic, the further research will continue with exploring the role of Industry 4.0 and its impact on tourism sector development within the world economy development particularly in the U.S. economy and Slovak regional development issue.

Acknowledgements

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A Massive Outflow of People from EU Periphery and Its Depopulation: Focus on Lithuania

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Abstract

Emigration from EU periphery began after the system change, and it has been proceeding at an accelerated pace especially after its EU accession. In this paper a problem of a massive outflow of people from EU periphery and its depopulation is considered with focus on Lithuania. During 27 years from 1992 through 2019 the population has decreased by about a quarter (24.6%). Net international migration contributed to 80% of a decrease in population in Lithuania. There is phenomenon of emigration also from Estonia, but in Estonia it is not so intense as in Lithuania. This paper considers causes of such a massive emigration from Lithuania, taking into consideration differences from the case of Estonia. Larger income inequality compared with Estonia has been a key factor urging people to emigrate. It seems that a series of reforms after the system change, especially the Lithuanian government's desperate efforts to enter the Eurozone have caused strains on the society.

Keywords: *depopulation, emigration, EU, Lithuania, periphery*

JEL Classification: *J61, P51, P52*

1. Introduction

A massive outflow of people from EU Periphery continues. A too rapid outflow of people has been giving serious influences on the economic development of sending countries. In Lithuania, for example, during 27 years from 1992 through 2019 its population has decreased by about a quarter (24.6%). Net international migration (immigration - emigration) contributed to 80% of a decrease in population in Lithuania. As an aging society with fewer children in parallel with such a too rapid decrease in population is causing a lack of skilled workers and a fear that the pension budget would not be maintained in the future, this situation is taken by many people with a sense of crisis. Such a phenomenon will affect also host countries. These countries show great consideration for migrant workers' social integration, but it takes a time and a certain cost. If foreign workers flow into advanced EU member states at a too rapid pace, it might cause friction in their society.

As for international labor migration, a majority of studies so far have focused on host countries, but I am studying the problem from a standpoint of sending countries. In recent years I have made surveys on cases of Bulgaria, Romania and Lithuania (see Koyama, 2018, 2019a and 2019b). Bringing these case studies together, I will discuss a problem of a massive outflow of people from EU periphery and its depopulation with focus on Lithuania.

2. Emigration from Lithuania

Emigration from EU periphery began after the system change. The number of emigration was not so much from the early 1990s through the early 2000s, but the number of emigration rapidly increased in 2004 and 2005. Reflecting a boom in Lithuania (similar to other Baltic states), emigration declined after 2005 while return migration, albeit almost symbolic, rose. In early 2008 the bubble burst and then global financial crisis dealt a final blow. In late 2008 the Lithuanian economy fell in crisis, and the unemployment rate soared from 4.3% in 2007 to 17.8% in 2010. The situation with young people was much worse with the unemployment rate soaring from 8.4% to 35.7% in the same period (Table 1).

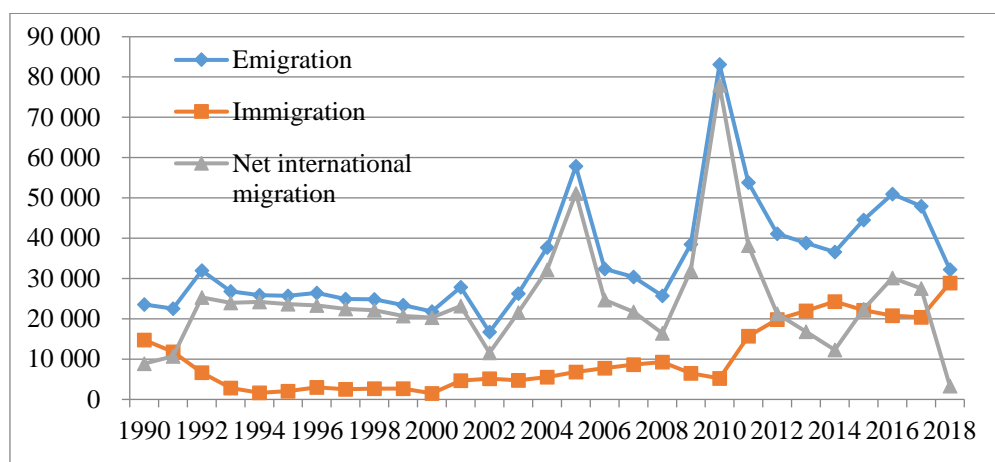
Table 1: Lithuania's Unemployment Rates after the System Change (%)

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Unemployment rate	1.1	1.2	13.8	13.8	17.5	16.4	14.1	13.7	13.4	15.9	16.8	10.3	12.9	10.7
Young people's unemployment rate	2.7	3.0	25.6	25.4	31.6	29.6	25.8	25.3	25.5	28.6	31.6	20.4	26.9	20.3
Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Unemployment rate	8.3	5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8	10.7	9.1	7.9	7.1	6.0
Young people's unemployment rate	15.8	10.0	8.4	23.4	29.6	35.7	32.6	26.7	21.9	19.3	16.3	14.4	13.2	12.5

Note: Here young people denotes males and females of 15-24 years old.

The significance of migration has once again changed from an expression of “free choice/freedom of movement” to a desperate search for economic opportunities abroad and a “survival strategy”. In 2010 there was an unprecedented peak. After 2011 the economy recovered with moderate economic growth (the growth rate being between 2.0% and 4.1% in the period 2011-2014). The unemployment rate decreased from 9.1% in 2015 to 6.0% in 2018. Also the unemployment rate for young people decreased from 16.3% to 9.1% during the same period. In spite of moderate economic growth and decreasing unemployment, emigration strangely increased again from 2014 through 2016.

Figure 1: Changes in the Number of Emigrants and Immigrants



Source: Prepared by the author based on data of the Lithuanian Statistical Office

Note: In order to make the table more understandable, the numbers of emigration, immigration and net international migration are expressed in their absolute values.

There have been huge income gaps between post-socialist countries and advanced EU member states. During the socialist period labor migration was impossible with exception of former Yugoslavia, but after the system change in 1989/90 it became rather free for people in the region to move across borders. As eight post-socialist countries in Central and Eastern Europe finally realized their EU accession in May 2004, people of these countries including Lithuania as EU citizens became able to move freely within the territory of the EU. They became able to participate in labor markets of the member states. This made it much easier for them to emigrate.

After the system transformation many farmers suffered from small scale of their farms. Unemployment has been high among rural youth, and a lot of young generation in rural areas lacked education and professional skills. Unemployed rural youth migrated to cities in search of jobs, but they found insufficient jobs there. Young people with higher education in urban areas tend to migrate to advanced countries. According to Ubareviciene (2017), indeed the proportion of emigrants is the highest in major cities, especially Vilnius, but foreign destinations were also very important in rural areas, and in some of them (north western part and other areas which are more distant from Vilnius, Kaunas and Klaipeda) emigration was a prevailing trend.

3. What Drives People to Emigrate?

There are many factors driving people to emigrate from post-socialist countries to advanced EU member states. Here at least two factors should be mentioned.

3.1 Huge Income Gaps between Post-Socialist Countries and Advanced EU Member States

There have been huge income gaps between post-socialist countries and advanced EU member states. During the socialist period labor migration was impossible with exception of former Yugoslavia, but after the system change in 1989/90 it became rather free for people in the region to move across borders. As eight post-socialist countries in Central and Eastern Europe finally realized their EU accession in May 2004, people of these countries including Lithuania as EU citizens became able to move freely within the territory of the EU. They became able to participate in labor markets of the member states. This made it much easier for them to emigrate. It is quite natural that people migrate from poorer countries in Central and Eastern Europe to advanced EU member states, but I wonder until when such migration continues.

Some researchers argue that according to the classic theory, the migration process stops when payments for work are equal in both countries (Pociovalisteanu, 2012). Indeed emigration is an economic phenomenon, but as non-economic factors such as people's special attachment to their regions where they were born and grew up affect their decision-making on migration I do not think that migration continues until payments for work in advanced countries and less developed countries becomes equal.

3.2 A Significant Level of Unemployment already before the EU Accession

A significant level of unemployment was caused by rapid changes in the industrial structure (see Table 1). In the case of Lithuania, as the transition to a market economy proceeded, traditional activities in rural areas (agriculture, forestry and fishery) declined. Instead of heavy and massive industries which were dominant ones during the period of centralized socialist planned economy, service activities came to play important roles. Consequently, local small

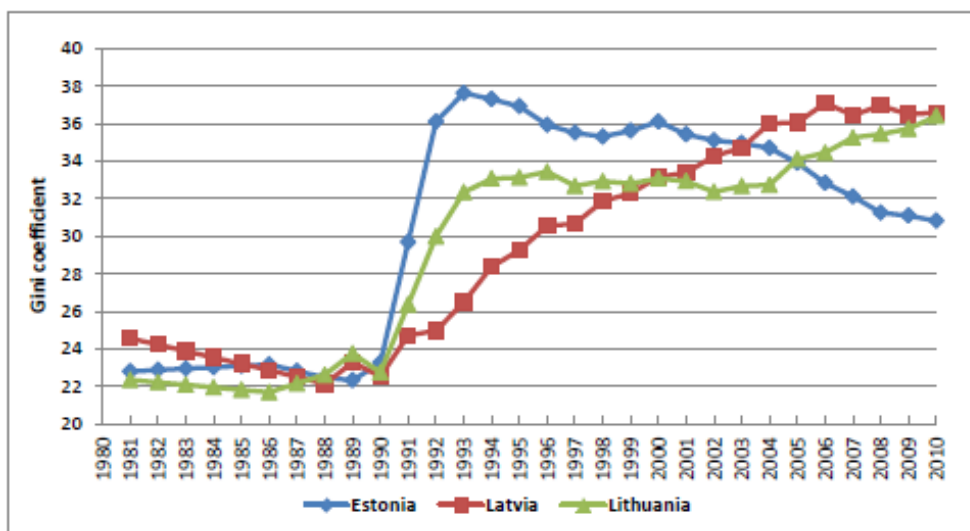
and medium-sized cities where the above-mentioned industries were located have also declined, leading to an increase in unemployment rate (Ubareviciene, 2017).

4. Expansion of Income Inequalities within a Country

In spite of a decrease in the unemployment rate, emigration continues. It seems that the expansion of income inequalities within a country has been one of substantial factors driving people to emigrate. During the socialist period, especially in the 1980s Gini coefficient for the Baltic states fluctuated between 19 and 25 (Gini, 2012, p. 12). After the system change, however, in the process of transition to a market economy the income inequality has quickly expanded in all Baltic states (see Figure 2). In Estonia the largest inequality was recorded in the early 2000s and then it decreased thanks to the more rapid increase of the incomes in the lower income groups. In contrast, in Lithuania and Latvia the inequality has expanded further from 2008 through 2012. (Gini, 2012, p.1 and p. 12).

Also Kumpikaite-Valiuniene (2019) questions more intense emigration from Lithuania compared with Estonia. She says that these are for mostly non-economic reasons as political and economic changes were very similar in all three Baltic states, and she adds, “it could be explained by a feeling of injustice”. Inequality in Lithuania has expanded rapidly from 2007 through 2011. According to Zuckute (2013), Latvia in 2006 and Lithuania in 2010 recorded the highest income inequality among all the EU countries (p. 183).

Figure 2 Dynamics of Income Inequality in the Baltic States, 1980-2011



Source: Gini (2012), p. 12; The original source is Standardized World Income Inequality Database (SWID).

What happened in Lithuania in the 21st century? As mentioned earlier, the Baltic states attained their long-cherished desire of EU accession in May 2004. Immediately before their EU accession interest rates have decreased thanks to increased trustworthiness of these countries. In addition, Nordic banks including Swedish four major banks advanced into the

Baltic states, and local affiliates of these banks competed for market share. Resulting cheap funds and generous criteria for loans caused housing bubbles in mid-2000s in the Baltic states. At that time they were called “Baltic Tigers”. After the bubble burst in the early 2008, the global financial crisis dealt these countries a final blow. Inflows of short-term foreign capitals had stopped and then flew backward. As a result, all the Baltic states recorded double-digits declines in GDP.

However, impacts on people’s lives of the global financial crisis were different in these countries. As the Estonian government was able to use the budget surplus in the pre-crisis years to accumulate reserves which helped to withstand the crisis, its damage was the least (Norkus, 2012, p. 265). In contrast, Lithuania and Latvia could not afford to use reserve funds in coping with the crisis and consequently the damage to people’s lives was much more serious (see Koyama, 2010).

All EU member states adopted Keynesian policies which allowed governments to have substantial budget deficit temporarily. However, as early as in June 2010 – not very long since the onset of the crisis – the Troika (the European Commission, the European Central Bank and the IMF) decided to take austerity measures and put pressure on governments and monetary authorities in the EU member states (Blyth, 2013, pp. 59-61). Usually, the amount of tax revenue decreases at a time of recession while governments are obliged to increase public expenditures in order to cope with increasing unemployment and other social needs. Nevertheless, the Troika imposed austerity measures on governments of the EU member states. The government of Lithuania implemented this policy faithfully, reducing public expenditures substantially.

Later in January 2011 Estonia joined the Eurozone, followed by Latvia in 2014. Originally, also Lithuania aimed to adopt the Euro in 2007. However, the country was judged ineligible by the EU in 2006 as the country did not satisfy the criteria. The Euro adoption was prolonged due to damages by the Global Financial Crisis. However, the government of Lithuania persisted in the Euro adoption and aimed to adopt the Euro in January 2015. In fact, the governments have done it. For this goal to be attained, governments have made every effort to reduce budget deficit, putting importance on the Maastricht convergence criteria, especially criteria on budget (budget deficit less than 3% of GDP and accumulated public debt less than 60% of GDP). Similar to other Baltic states, Lithuania had adopted the currency board system and attached importance to the external balance. Even in the face of the global financial crisis, instead of official devaluation of its national currency Litas, did the country the so-called ‘internal devaluation’ (namely, reduction of wages and pensions) in order to maintain its international competitiveness. The Euro adoption (the entry into the Eurozone) was the country’s first priority after its EU accession. It seems that even if the independence in financial policies was lost the country attached more importance to the independence from Russia’s economic area and the entry into the European economic area. It is not difficult to imagine that these efforts gave substantial stress to the Lithuanian society.

In addition, Lithuania has had a flat tax system, which has been disadvantageous to low-income bracket and very advantageous to rich people and has become a factor contributing to an expansion of inequality. The EU’s country report explains as follows: “Inequality of incomes in Lithuania is one of the highest in the EU, and has been increasing since 2012. It results from high employment gap between low-skilled and high-skilled workers, strong wage dispersion, the limited progressivity of the tax system and weak social safety nets. The tax benefit system in Lithuania is less effective at reducing inequality than in other EU countries. Furthermore, high income inequality is considered to be detrimental to economic growth and macro-economic stability. In Lithuania, it could also be contributing to high emigration. Also,

the poverty rate remains high, especially among the disabled, pensioners, in particular older women, and the unemployed, primarily due to weak protection provided by the social welfare system” (European Commission, 2017, p. 1).

As we have seen, there seems to be certain relationship between the economic inequality within a country and a massive emigration. It is a Lithuanian young researcher Indre Genelyte (2018) who clearly shows the relationship between the economic inequality within a country and people’s emigration. Using the theoretical model of Albert Hirschman’s *Exit, Voice and Loyalty*, she explains the reason for a rapid increase in the number of emigrants from Lithuania. According to her, the global economic crisis and the implementation of austerity measures has brought an ‘objective’ situation in which the economic decline potentially affected the quality of life of individuals. Highlighting the importance of how inequality translates into quality of life, she says that individual perceptions about decline in the quality of life led many people to decisions of not ‘voice’ but ‘exit’, i.e. emigration.

5. Advantages and Disadvantages of Emigration

There are many issues to be discussed concerning advantages and disadvantages of emigration. Here two points should be explained.

5.1. Impacts of Emigration on the Origin Economy

In this regard, a study by Lithuanian researchers Remeikiene and Gaspareniene (2019) is helpful. They mention return migration of emigrants with new experiences as benefit for both short-term and long-term emigration.

As for short-term emigration, they mention reduction of unemployment rate as an advantage. Of course there is a monetary advantage. In 2011, for example, remittance from abroad amounted to 4.6% of GDP, which corresponded to about 25% of total wages paid in Lithuania in that year (Sipaviciene and Stankuniene, 2013, p. 58).

Advantage of long-term emigration is, as mentioned above, return migration with a new experience, but this is just an assumption that the emigrants would return home. If they stay permanently in destination countries, ‘a new experience’ which should have been brought from destination countries would be never brought in sending countries. It is natural that part of emigrants stay permanently in destination countries, but if most of long-term emigrants do not return home, ‘a new experience’ would be relatively small, and the above-mentioned disadvantages would by far exceed advantages.

5.2. Brain Drain

Emigration of highly skilled people such as specialists of high technology and medical workers continues. As Romania has the fewest number of practicing medical doctors per capita in the EU, the medical brain drain has become an “issue of national concern”(Anghel, et al, 2016, p. 20). However, their exodus has not necessarily been driven by their egoistic motivation. Andren and Roman (2014) point out inadequate working conditions, a lack of reasonable incentives and an unsatisfactory career development system as well as the overloading of the remaining staff with extra tasks as factors for rapid increase in the medical brain drain. Such a low level of health care system also accelerates people’s emigration. It seems Lithuania is in a similar situation in this respect.

6. Conclusion

In peripheral new EU member states industrial structure has been drastically changed in the process of transition to a market economy after the system change. Heavy and massive industries have declined causing a high unemployment. Industries and services in cities could not absorb unemployed people sufficiently. In addition, big economic inequalities with advanced EU member states as well as income inequalities within a country have driven many people to emigrate. As the European Union has the principle of free movement of people, it is natural for workers to move across borders. However, people's emigration from EU periphery at a too rapid pace has given negative influences on the economies of sending countries. Sending countries' efforts, for example, creation of jobs and taxation reform for reducing income inequalities within a country will be required.

It is economically rational that advanced EU member states absorb highly-qualified workers such as medical doctors, nurses and IT experts, who have been trained by EU periphery at a considerable cost, but on the other hand there remains a problem when we take into consideration sustainability of development of the EU as a whole. Austerity measures, which the EU (together with the European Central Bank and the IMF) imposed member states prematurely, prevented peripheral member states from adopting effective policies, resulting in accelerated outflow of people. More attention should be paid to the improvement of working conditions for highly-qualified workers in peripheral member states.

Assistance to new EU member states from the EU's Structural Funds and Cohesion Fund has been directed mainly to the improvement of infrastructure in poorer regions, but it seems that such assistance has not brought creation of sufficient jobs in peripheral member states and fewer outflow of people from them. It would be better for policies makers in the EU as well as researchers to pay more attention to challenges of development of human capital in peripheral member states. The EU will need switchover to its polycentric development.

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Harmonization of Personal Income Tax Rates in Selected Central European Countries

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Abstract

The European Union has paid significant attention to tax policy issues since its inception. Differences of tax policy among Member States hamper the functioning of the single internal market. The aim of the paper is to evaluate the state of harmonization of personal income tax rates in the Czech Republic and its neighbouring countries by applying a parametric two-sample test. In addition to methods for hypothesis testing, the paper also uses methods of description, analysis, synthesis and comparison. The results show that the harmonization process in the area of personal income tax rates in the analysed countries is stagnating and the differences are widening even more. While the nominal tax rate in the Czech Republic is linear, in the other analysed countries the tax rate is progressive. The absence of directives regulating the basic elements of a personal income tax throughout the European Union has resulted in very significant differences in the tax rates of personal income tax.

Keywords: central Europa, personal income tax, tax harmonization, tax rate

JEL Classification: C12, F65, H24, K34

1. Introduction

Personal income tax is an important part of the tax systems of all countries of the European Union. These tax systems were originally built according to each country's own rules, considering the political, legal or natural factors. The globalisation nature of the economy leads to cooperation between Member States of the European Union also in the field of tax policy. The result of these steps is tax harmonization, which is aimed at adapting and aligning national tax systems on the principle of respecting the common rules. One stage of harmonization for each tax is the harmonization of the tax rate.

In the field of indirect taxation, value added tax is broadly harmonized (Krzikallová and Strílková, 2016). On the contrary, in the field of direct taxation, the harmonization process stagnates. In case of a personal income tax, this is mainly due to the reluctance of states to further harmonize it, since the intervention in fiscal policy, for which personal income taxes are one of the main instruments, are considered to be an interference with their sovereignty (Šíroký, 2016 or Kuznetsova, Krzikallová and Kuznetsov, 2017). In view of the above mentioned, the article focuses its analysis in more details not on all countries of the European Union, but only on the Czech Republic and its neighbouring states.

The aim of the article is to evaluate the state of harmonization of personal income tax rates in the Czech Republic and its neighbouring states, i.e. Germany, Austria, Poland and Slovakia in 2019, compared to the legislation in force in 2014 using methods for hypothesis testing. The reason for the selection of these states is their similar historical development, cultural traditions

and geographical location in Central Europe. The year 2019 is the last year analysed for which data on selected personal income tax elements are available. The second analysed year is 2014. The period of 5 years ago is selected due to the time-consuming nature of implementing changes to legislative adjustments of the taxation of incomes by personal income tax (Kotlán, 2009).

2. Literature Review

Personal income tax is the subject of research and studies from many points of view. One of the examined aspects is also the personal income tax rates. General principles of the personal income tax are stated by e.g. Wagstaff and Van Doorslaer (2001). A typical feature of personal income tax is the progressive tax rate (Li and Lin, 2015). Its existence ensures that the tax burden increases together with the increasing income. Musgrave and Thin (1948), Kakwani (1977) or Suits (1977) were dealing with the general ways of measuring the tax progressiveness. Using the EUROMOD microsimulation model Verbist and Figari (2014) analysed the reasons why the personal income tax is progressive in the selected 15 countries of the European Union. The main reason is to ensure the redistribution function of taxes.

Regulation of income taxation has undergone major changes in accordance with ongoing international harmonization (Hakalová, Palochová, Pšenková and Bieliková, 2018 or Morini and Pellegrino, 2018). Since 2008, the Czech Republic has been unique in its construction of the tax base, which is a super-gross wage. At the same time, the nominal progressive tax rate was replaced by a linear rate. The existence of maximum chargeable amounts for social insurance as well as the provisions of the Income Tax Act on solidarity tax increase cause that in most cases the personal income tax remains a progressive tax according to the analysis of Široký, Friedrich and Maková (2012) or Vlachý (2008). The abolition of super-gross wage as a tax base as well as the retroactive introduction of the progressive tax rate was considered to start on 1 January 2015 (Dušek, Kalíšková and Münich, 2014). The planned changes were ultimately not implemented into the tax legislation, so the Czech Republic remained as the only state of the European Union compared to neighbouring states, where the tax base is a super-gross wage and the nominal tax rate is of a linear type.

The results of the study carried out by Široký and Kroulíková (2003) show that in Slovakia, personal income tax is also a progressive tax. At the same time, it has been found that changes in tax allowances do not have a major impact on the degree of tax progressiveness. On the contrary, average wages were a significant factor influencing this fact. The comparison of the tax burden of the Czech and Slovak Republic shows that there is a higher tax burden in Slovakia (Mazanec and Bieliková, 2017).

Poland joined the European Union as a economy characterized by relatively low socioeconomic development (Pawlas, 2018). The Polish Income Tax Act, as well as the Czech one, allows taxpayers with dependent children in a common household to apply the amount of tax advantage that may take the form of a tax bonus, which according to Mazurek and Kosny (2010) significantly affects the tax burden of many taxpayers. On the other hand, the nominal tax rate is progressive and ensures the redistribution role of taxes better (Stephenson, 2018).

Compared to Slovakia or Poland, the remaining two neighbouring countries – Germany and Austria are more economically advanced (Melecký and Staničková, 2014). Bach and Steiner (2013) analysing the taxation of above-average incomes state that since 2001, the degree of tax progressiveness in Germany has decreased. Similar findings are shown by the results of the Schratzenstaller and Wagener study (2009) carried out in Austria.

The progressiveness of a personal income tax is not only a sign of tax systems in European Union countries, it is also typical for other parts of the world (Reith, Checherita-Westphal and Attinasi, 2016 or Li and Ma, 2017). The results of the research point to the fact that tax reforms brought gradual decreasing of the personal income tax progressiveness.

Harmonization is carried out not only in the field of taxes in the Czech Republic. Significant are the changes related to the harmonization process in accounting, using International Financial Reporting Standards, which are dealt with in more detailed way by e.g. Hakalová, Pšenková and Losová (2014).

3. Problem Formulation and Methodology

In order to achieve the article objectives of the standard positivist economic methodology involving description methods, comparison, deduction, synthesis and analysis is used. For verification of the significance of the difference between two selected variances, testing of parametric hypotheses, namely *F*-test (Sanderson and Windmeijer, 2016), is used.

The *F*-test criterion formalised value can be determined according to (1),

$$F = \frac{n_1 \cdot (n_2 - 1) \cdot S_1^2}{n_2 \cdot (n_1 - 1) \cdot S_2^2}, \quad (1)$$

where n_1 and n_2 are ranges of selections and S_1^2 and S_2^2 are variances of selections. The zero hypothesis H_0 is formulated by relation (2),

$$H_0 = \sigma_1^2 > \sigma_2^2, \quad (2)$$

where σ_1^2 and σ_2^2 are variances of selections. A right-hand type of test is selected. If the value of test criterion *F* is higher than the critical scope $F_p(n_1-1; n_2-1)$, a zero hypothesis is rejected.

3.1 Data

The input data for analysis consists of selected components of personal income tax in Germany, Austria, Slovakia, Poland and the Czech Republic in 2014 and 2019 and they are shown in Table 1 and Table 2. More specifically, the number of personal income tax rates, the existence of a zero tax rate and the values of the nominal tax rate are monitored in the lowest and highest tax bracket.

Table 1: Selected Aspects of Personal Income Tax in the Year 2014

	Number of rates	Existence of zero tax rate	Lowest rate [%]	Highest rate [%]
Czech Republic	1	No	15	15
Austria	5	Yes	0	50
Germany	5	Yes	0	45
Poland	3	Yes	0	32
Slovakia	2	No	19	25

Source: own processing according to Schellekens (2014)

Table 2: Selected Aspects of Personal Income Tax in the Year 2019

	Number of rates	Existence of zero tax rate	Lowest rate [%]	Highest rate [%]
Czech Republic	1	No	15	15
Austria	5	Yes	0	50
Germany	5	Yes	0	45
Poland	2	No	18	32
Slovakia	2	No	19	25

Source: own processing according to Schellekens (2019)

If harmonization in this area were to be carried out, the differences between countries should decrease in 2019 compared to 2014. Whether this was the case or not is verified by using the selected parameter test for testing the hypotheses – *F*-test.

4. Problem Solution

The adjustment of the tax rate in the analysed countries is in different parameters both in 2014 and 2019. The fundamental difference in both periods analysed between the Czech Republic and the other countries is in the type and number of rates. Since there is only one nominal tax rate in the Czech Republic, it is a linear type of rate. On the contrary, the other analysed states use a progressive tax rate to determine the tax liability of a taxpayer. The differences also persists in other parameters. The averages and variances values per parameters examined in 2014 (\bar{x}_1 ; σ_1^2) and 2019 (\bar{x}_2 ; σ_2^2) are demonstrated in Table 3.

Table 3: Mean and Variance

	Number of rates	Existence of zero tax rate	Lowest rate	Highest rate
Mean 2014	3.2	0.6	6.8	33.4
Mean 2019	3	0.4	10.4	33.4
Variance 2014	3.2	0.3	88.7	205.3
Variance 2019	3.5	0.3	92.3	205.3

Source: own processing

The zero hypothesis, based on the assumption that the personal income tax harmonization process has progressed, is formulated for all four analysed parameters (number of rates, zero rate existence, the lowest rate and the highest rate) in the $H_0 = \sigma_1^2 > \sigma_2^2$. If the legislation is harmonized, it can be assumed that the differences in the second analysed period (2019) will be smaller than those in the first analysed period (2014). The alternative hypothesis takes the form of $H_0 = \sigma_1^2 \leq \sigma_2^2$. Testing of hypotheses is carried out according to Brase, Brase and El-Iraki (2019) at 5% of the significance level. Test results of selected personal income tax rate parameters are shown in Table 4.

Table 4: Hypothesis Testing

	Number of rates	Existence of zero tax rate	Lowest rate	Highest rate
Test criterion F	0.914	1	0.960	1
Critical value F_p	0.156	0.156	0.156	0.156
Conclusion	$F > F_p$	$F > F_p$	$F > F_p$	$F > F_p$
Accepted / rejected	H_0 rejected	H_0 rejected	H_0 rejected	H_0 rejected

Source: own processing

The results show quite the opposite fact, the tax harmonization in the field of the personal income tax rate has not taken place in mentioned states, on the contrary, in some cases the differences have increased even further.

The alignment of the legislation, or at least a partial elimination of the differences in the field of personal income tax rates in 2019, did not occur contrary to the applicable 2014 legislation. The number of rates remained the same except for Poland. The willingness of countries to adapt the legislation concerning taxation of incomes to a neighbouring state is minimal. The reduction of the number of tax rates in Poland is at the same time offset by a reduction of the zero tax bracket, that remains in Germany and in Austria. At the same time, these two states have those analysed aspects most similar.

Significant differences also persist in terms of the highest and lowest tax rate. The existence of a zero tax rate in Austria, Germany (and until 2016 in Poland) guarantees that the taxpayer has a certain non-taxable threshold. This non-taxable threshold is guaranteed by law in the Czech Republic or Slovakia by the existence of a tax credit for the taxpayer. A fundamental difference can therefore also be noted in this field. There is also no precondition for a uniform adjustment system for the foreseeable future, since, historically, the zero tax rate in Slovakia or the Czech Republic has never been introduced. Furthermore, the highest personal income tax rates appear to remain on the same level in all states in 2019 compared to 2014.

5. Conclusion

The aim of the article was to assess the development of the harmonization of personal income tax rates in the Czech Republic and their neighbouring states in 2019 compared to 2014, using the selected two-selection parametric test. The results of the article demonstrate a clear stagnation in the field of harmonization of personal income tax rates for all the analysed states.

While in the Czech Republic the incomes, except for the case when they are subject to the solidarity tax, increase only by one nominal rate, in other states the tax rate is a progressive type. With the rising amount of incomes, it is thus ensured that the tax burden is growing faster. Austria and Germany have the most rates, which also, instead of tax credit for a taxpayer, use a tax rate of 0% for part of the incomes. On the contrary, this is not the case in the Czech Republic, Slovakia and since 2017 also in Poland. Here the role of a guarantee of a non-taxable threshold is a tax credit.

Significant differences between states remains in the fields of the lowest and the highest rate of the personal income tax. The reason is, on the one hand, the states with zero tax rate and, on the other hand, the application of a progressive tax rate compared to the linear tax rate in the Czech Republic. While there are two tax brackets in Poland and Slovakia in total, in Austria and Germany there are 5 tax brackets in total, whereas the last tax bracket reaches 50% in Austria.

Differences in the personal income tax have existed in the countries of the European Union since its creation. However, these were not the only differences in the field of taxation, since legislation was also not harmonized in the field of indirect taxation. However, the European Commission has favoured the harmonization of indirect taxes, namely by replacing the turnover tax by the value added tax and issued the directives with which value added tax laws must comply in each Member State of the European Union. No such action has been taken in the field of direct taxation, so the differences are deepening even further. Even in future years, there is no expectation for the issuing of directives that would, in a way, have a major impact on the currently stagnant process of harmonization in the field of direct taxation. This situation can be the direction for further research. One of the way could be extend the analysis period or make a new analysis in this area and compare new results with the results of this study. The harmonization of income taxes and property taxes was dealt with only slightly at the level of the case-laws of the Court of Justice of the European Union or by issuing directives, which, however, were thematically concerning the taxation of corporate tax revenues. The stagnant process of the harmonization in the field of direct taxation has an impact on the free movement of labour, goods, capital and services. Social security contribution is closely linked to the area of harmonization of direct taxes in the European Union. Social security contributions are considered to be tax payments. There are also major differences and intervention in this area would be seen as a limitation of the sovereignty of individual countries. The existence of completely different tax principles and legislations in the European Union makes that the only important document establishing rules for taxation of income across the world are double tax treaties. However, the methods applied by states to avoid double taxation are fully within the competence of each state.

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Structure of Czech Insurance Entities in the Single European Insurance Market

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Abstract

The Czech insurance market is a part of the single European insurance market. Insurance companies, insurance intermediaries and reinsurance companies have gradually gained an option to use this single European insurance market. They may operate based on the only a single authorization being granted in a home Member State under particular conditions and notification requirement to a supervisory authority of the home Member State. This created new obligations and rights for the entities. At the same time, new opportunities and threats related to participation in the single insurance market have opened up. Depending on the degree of integration into the economy of the host Member State, the entity operates under the right of freedom of establishment or the freedom to provide temporary services. The aim of the article is to assess the extent to which insurance market entities use the single insurance market, focusing on entities with seat in the Czech Republic. The analysis confirmed the hypothesis that entities prefer to operate on the basis of freedom to provide services over operations on the basis of establishment.

Keywords: *European Union, freedom of establishment, freedom to provide services, insurance, single insurance market*

JEL Classification: *F36, G22, K20,*

1. Introduction

The Czech insurance market is a part of the single European insurance market. Insurance companies, insurance intermediaries and reinsurance companies have gradually gained an option to use advantages but also disadvantages of this single European insurance market. The harmonization process in the Czech Republic in detail discusses for example Čejková and Vávrová (2004). The legal framework for the market was enacted on June 30, 1994.

In private insurance, a creation of a single passport in private insurance was a process of progressively removing obstacles. (in more detail Ennsfellner and Dorfman, 1998). By adopting individual EU directives, restrictions on national legislation have been gradually removed. In the private insurance sector, these restrictions are removed by Three Generations of life insurance and three generations of non-life insurance Directives and continuously issued directives specializing in certain areas of non-life insurance, insurance intermediaries and reinsurance. The principle of a single passport is based on the principle of authorization granted in one Member State, in which the business is seated or business person is living, enabling to operate in any Member State only on the basis of notification to the competent authority of the Member State which granted the authorization.

Depending on the degree of integration into the economy of the host Member State, the entity operates on the basis of the right to establish subsidiaries and the freedom to provide services (Böhm, 2004). In the insurance sector too, the decision-making on entering the international environment is a complicated and significant process. Mesršmíd (2016) presents several questions that need to be assessed. From choosing a new market, way of entering the market, assessing competition, marketing strategy and more, which are the same for other segments up to specific areas of insurance market such as the way and ensuring the claims settlement, insurance contract and insurance terms in the language of particular country or even the assessment of cultural practices in the field of insurance. Both the right of establishment and the freedom to provide services are based on the internal market rules laid down in Article 26 of the Treaty on the European Union Functioning. It says that the internal market comprises an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. In the context of free movement in private insurance, two options are possible, namely the use of a more permanent right of establishment or the freedom to provide services, which can be classified as temporary instruments (Týč, 2017).

The right of establishment in accordance with Article 44 of the Treaty on the EU Functioning includes an access to self-employment provided under the conditions laid down for any country's own nationals. It thus includes the right of a person to take up and pursue a self-employed activity and to set up and manage businesses aiming at pursuing a permanent and continuous activity under the same conditions as those laid down by the law of the Member State in which that person is established. In the Article 56 of the Treaty on the EU Functioning, freedom to provide services then prohibits a limitation of freedom to provide services within the European Union for nationals of Member States who are established in a Member State other than the recipient of the services. It applies to services which are normally provided for remuneration, unless they are governed by the provisions on the free movement of goods, capital and persons. To that end, the person supplying the service may operate temporarily in the Member State where the service is provided, under the same conditions as that Member State imposes on its own nationals.

The single insurance market system takes into account that European insurance companies can operate in all EU countries, or EEA even without the permission of the competent local authority of the Member State in which they intend to operate. They also do not have to meet any additional requirements that the competent authorities may impose on them. There are many studies dealing with assessment of integration process in the frame of insurance market and analyses of cross-border purchase of insurance. For example, Belke and Keil (2016) analysed the overall impact of global financial integration and of global liquidity on global macroeconomic. In their article, Ennsfellner and Dorfman (1998) stated that the question of whether the single market has led to increased or decreased concentration cannot be answered until at least ten years' data are available. However, Mesršmíd (2016) states that the possibility of analyzing cross-border trade in the insurance sector is still very limited. This is due to the lack of information and transfer of data between supervisors in the area. A study by Kasman and Turgutlu (2011), who analyzed cost-effectiveness and scale economies of insurance companies, is unique. The Czech Republic is also included in the study.

Finally, the IE Annual Report (Insurance Europe [online], 2018a) shows that the single insurance market is functioning well. To support the functioning of the insurance market, Insurance Europe recommends to prefer evaluating and improving existing rules and tools to developing new rules, using the principles of proportionality and subsidiarity. Other authors support this, e.g. Jagric, Bojnec and Jagric (2018) in their study state that the integration process in the insurance market should be further developed. And the integration processes in

the individual insurance markets of the EU Member States and the EU as a whole need to be further explored.

New opportunities and threats related to participation in the single insurance market have been introduced to the entities involved in the integration process. The opening of the entire European market for operators from the Czech Republic should be considered the opportunity. However, the disadvantage can be mainly seen in the increase in competition represented by higher number of insurance companies from other Member States. Depending on the degree of integration into the host Member State's economy and taking into account all the specificities of the case, the entity subsequently operates under the right to establish subsidiaries and / or the freedom to provide services.

The aim of the article is to assess to which extent insurance market entities use the single insurance market, with focus on entities established in the Czech Republic. The analysis confirmed the hypothesis that entities prefer to operate on the basis of freedom to provide services to operations on the basis of establishment. The article is based on the available data of the Czech National Bank (CNB), the Czech Insurance Association (CAP) in 2009 - 2019.

2. Analysis of Czech Insurance Market

Based on CNB data (Table 1), in 2019 there were 47 insurance companies operating in the Czech market - 26 domestic insurance companies and 20 subsidiaries of foreign insurance companies (from EU and EEA). There is 1 reinsurance company with CNB licence. In 2018, two EU subsidiaries closed down, one branch notified its activities. (CNB [online], 2019).

Table 1: Development of Number of Insurance and Reinsurance Companies in the Czech Republic

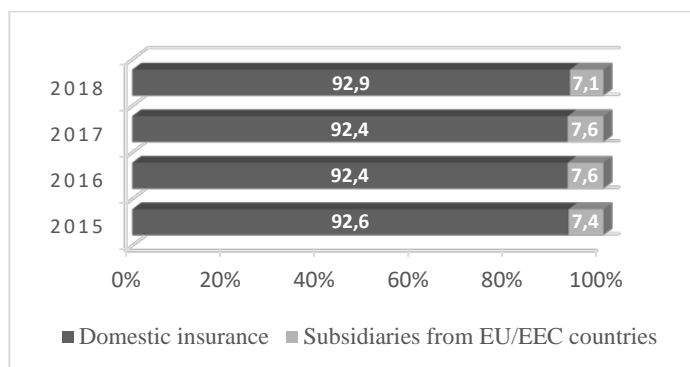
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Insurers and international insurers' subsidiaries	47	48	49	54	55	53	52	53	54	53	53
- domestic insurers	26	28	28	30	32	33	34	35	36	36	36
- subsidiaries from other EU countries	19	19	21	24	23	20	18	18	18	17	16
- subsidiaries from EEA countries	1	1	0	0	0	0	0	0	0	0	0
- subsidiaries from other countries	0	0	0	0	0	0	0	0	0	0	1
Reinsurance	1	1	1	1	1	1	1	1	1	1	1
Foreign insurers and insurance subsidiaries providing cross-border services in the CZ	976	966	890	864	825	790	744	715	696	665	621

Source: own elaboration by data CNB (2009 - 2019)

Table 1 also shows the stabilization of the number of **insurance companies** in the Czech Republic, which did not significantly increase or significantly decline over the past 10 years. In the Czech Republic, however, a slight decrease in insurance companies can be seen, mainly due to consolidation. Especially in response to the development in the domestic market, where with regard to the development in the society, the quality of provided services is increasingly emphasizing.

In terms of the ratio of gross written premiums between domestic insurance companies and subsidiaries of foreign insurance companies, the dominant position of domestic insurance companies still prevails. Domestic insurance companies have written 92.9% of total premiums (Figure 1). (CNB [online], 2019) The stabilization of the number of insurance companies operating in the Czech Republic is also based on stabilization of people's behavior, where the ratio of gross premiums between domestic insurance companies and subsidiaries of foreign insurance companies in the Czech Republic has been the same seeing it from the long-term perspective.

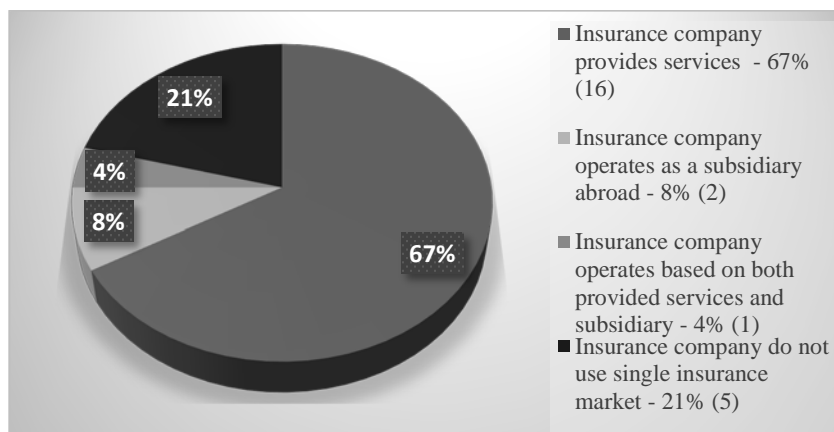
Figure 1: Ratio of Issued Gross Premiums between Domestic Insurance Companies and Subsidiaries of Foreign Insurance Companies in the Czech Republic



Source: own elaboration by data CNB (2014 - 2019)

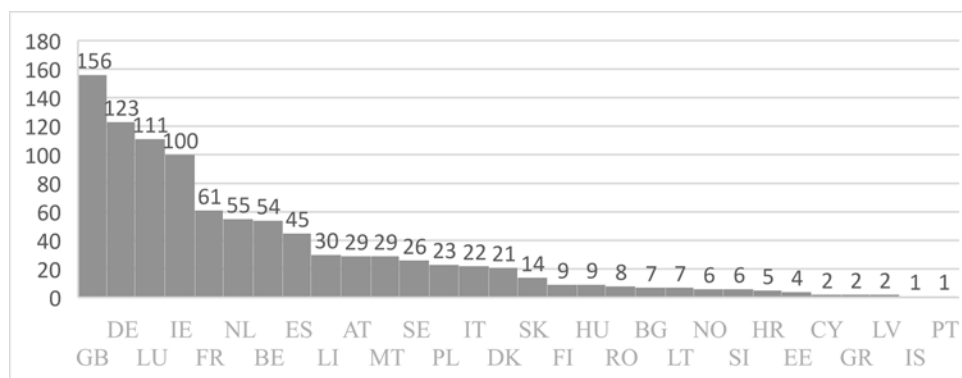
Further commentary on insurance companies and subsidiaries of foreign insurance companies we do not include ČKP and EGAP. Three domestic insurance companies had subsidiaries abroad, two in Slovakia and one in Poland. At the end of 2019, 17 domestic insurance companies operated in the Member States based on services provision. Out of those, only one domestic insurance company had subsidiary and provided services on the basis of the free movement of services. Out of the 26 domestic insurance companies, 5 do not use the opportunity of the single insurance market. (Figure 2)

Out of the 20 subsidiaries of foreign insurance companies of the EU or EEA countries, 2 insurance companies use the single insurance market based on the provision of services, namely in Slovakia and Hungary. A reinsurance company operating in the Czech Republic, on the basis of a CNB license, provides services abroad within the framework of the free movement of services.

Figure 2: The Use of Single Insurance Market by Domestic Insurance Companies in 2019

Source: own elaboration by data CNB (2019 - 2020)

As for the gradual noticeable increase in the number of foreign insurance companies providing cross-border services in the Czech Republic, this is probably a reaction to the Czech Republic becoming increasingly interesting for foreign entities. The Czech Republic has been in the European Union for more than 15 years and this fact affects people's behavior and their trust in insurance companies operating in the common European market. In 2019, the number of these insurance companies increased again, from 966 to 976, i.e. a year-on-year growth by 1.03%. Most of those insurance companies specialize in non-life insurance. CAP ([online], 2019) state the scope of trades being provided in units of billion CZK. As it comes to cross-border services provision, there are Great Britain (156), Germany (123), Luxembourg (111) and Ireland (100) involved the most. Portugal, Iceland, Latvia, Greece or Cyprus are the least represented (Figure 3).

Figure 3: Foreign Insurance Companies and Subsidiaries Providing Cross-Border Services in the Czech Republic in 2019 – Division

Source: own elaboration by data CNB (2019 - 2020)

Due to the growing consolidation in the insurance industry, the number of insurance institutions is falling every year. Based on the Insurance Europe ([online], 2018b), “around 3 500 insurance companies were active in Europe in 2016, a decline of 2.5% on the previous year. This total is the number of domestic companies and subsidiaries of non-EU/EEA

(European Economic Area) country companies.” In principle, we can say that in the Czech Republic in 2016, 26% of the European insurance companies operated based on the right to establish subsidiary and freedom to provide services.

Monitoring of statistical indicators in the **insurance intermediary** area is more difficult. There was a change in the regulation of insurance intermediaries made (change since the new act came into force on 1st December 2018) as well as in their categorization and the system of registration and the register has been updated, too. Analysis of insurance distribution on the Czech insurance market describe Krügerová (2017). Due to these changes, statistical data are reported for the period 2015 - 2019 (Table 2). Changes in the number of domestic insurance intermediaries do not mean that the number of insurance intermediaries became so significantly reduced. The re-registration system meant, above all, clearing the market of so-called dead souls (activity of non-performing entities).

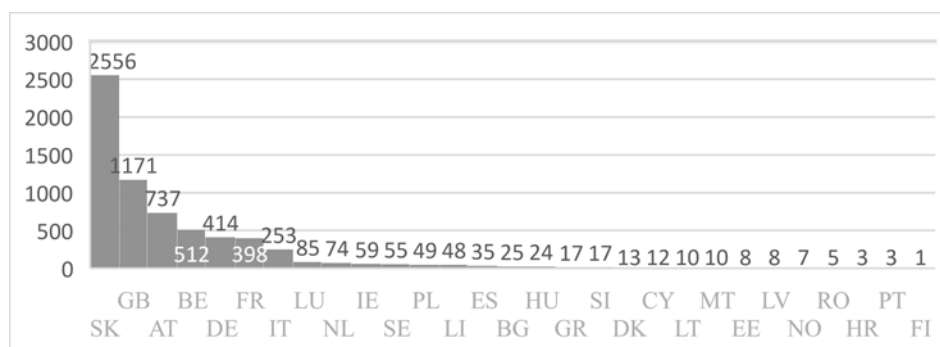
Table 2: Development of Number of Insurance Intermediaries in the Czech Republic

Group	2019	2018	2017	2016	2015	2014
Insurance intermediaries by Act No. 170/2018 Coll., on distribution of insurance and reinsurance	38481	1	0	0	0	0
Insurance intermediaries by Act No. 38/2004 Coll., on insurance intermediaries and independent loss adjusters	0	177713	174580	167820	162956	157246
Insurance intermediaries with home Member State other than the CZ	6609	6508	6248	6001	5805	5694

Source: own elaboration by data CNB (2009 - 2019)

Unfortunately, it is not easy to find out in which countries domestic insurance intermediaries operate. Nevertheless, it can be concluded from the new categorization that cross-border activities will be carried out primarily in the category of independent intermediary, of which 1164 out of a total of 38481 insurance intermediaries were in 2019. We can therefore assume that entities will carry out cross-border activities up to this number. In the Czech Republic, there were 6609 insurance intermediaries with a home Member State other than the Czech Republic. In this case, base the CNB statistics, it is not possible to assess on what basis they perform this activity in the Czech Republic. Most of them are from neighbouring Slovakia (2556). (Figure 4)

Figure 4: Insurance Intermediaries with a Home Member State other than the Czech Republic, 2019 – Division



Source: own elaboration by data CNB (2019 - 2020)

Statistics on **cross-border sales** are limited. According to the data on the share of premiums, it can be concluded that the cross-border sale of insurance is low. In terms of the sale of insurance within the single insurance market, tax, language, culture, lack of harmonized contract law, difficulties in cross-border debt management are most often cited as barriers. Good client's awareness serves as the basis to increase insurance sales across borders. The information must be provided in the interest of the clients, i.e. information before purchasing the insurance contract and throughout the duration of the contract, during the settlement of the insured event or even during the handling of complaints. And it must be understandable, but even balanced. A lot of information makes damage and little does so as well.

3. Conclusion

From the above mentioned, it is clear that there are many different variants of the European Union entity's activities in the Czech Republic in the insurance industry. As in the case of other services, the effects of the freedom to provide services and the right of establishment are fully visible in this area. Insurance companies from the EU thus have two options. Either establish their subsidiary in the Czech Republic and provide services subsequently as domestic entities or use the principle of a single European passport, which allows them to provide services anywhere within the European Union under a reporting obligation in one Member State. This creates a framework for the creation of a single European market, which has been fully used here within 15 years of the Czech Republic's membership in the European Union. The number of insurance companies established in the Czech Republic has stabilized, while the number of foreign insurance companies and subsidiaries of insurance companies providing cross-border services in the Czech Republic has been steadily increasing.

The use of the single insurance market by domestic insurance companies is a separate chapter. Although domestic insurance companies have often become part of multinational corporations in the past, they continue to make use of cross-border sales opportunities. They more often choose to provide a service in another state. This is not considered a major influence of the European insurance market. This may also be due to mentioned possibility that most of the major players in the Czech insurance industry are part of multinational corporations. And there is no reason for individual companies to compete with each other. Rather, it is the use of this option to insure business clients within parent and subsidiary companies.

Based on provided research, it was found out that the Czech Republic fully integrated into the single insurance market systems. It is used by both foreign entities operating in the Czech Republic in various forms as well as by domestic insurance companies and insurance intermediaries. *We confirmed the hypothesis that entities prefer to operate on the basis of freedom to provide services to operations on the basis of establishment.* In the further research, the authors will assess whether and for what reason entities operating in the form of establishment also operate on the basis of freedom to provide services and vice versa.

The European Union's role in this area is to create the same condition for all insurance subjects not only in terms of access to the provision of insurance services, but in particular in terms of regulation and supervision. Indeed, regulation and supervision within the single insurance market must effectively and equally protect consumers across EU markets, whether they purchase their insurance products in the national market or from foreign entities. In the future, it is expected that the behavior of Czech consumers in the insurance market could change, especially in relation to the growth of confidence in foreign entities

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Social Security Contributions – Important Part of Tax Burden within the Selected European Union Countries

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Abstract

Social security contributions are important fiscal policy instruments of all the European Union countries. Equally important role is played by contributions to social insurance in employment, which significantly increase labour costs. The amount of these payments varies from one Member State to another, as social insurance sector is not substantially harmonized, in contrast to indirect taxes. One of the reasons is that social security contributions show the classification characteristics of direct taxes. The aim of the paper is to evaluate the degree of dependence of the collection of social security contributions on the tax quota, the share of social security contributions as a tax payment on the tax quota and the unemployment rate in the Visegrad Four countries. The results of the analysis show a high degree of dependence of social security contributions' collection on the tax quota, or unemployment rate in the Czech Republic, Slovakia and Poland. By contrast, Hungary has only minimal dependencies on these indicators. One of the reasons is the different trend in the development of the tax quota.

Keywords: correlation analysis, European Union, social security contributions, tax quota, Visegrad Four countries

JEL Classification: C10, F66, H20, K34

1. Introduction

Compulsory social security contributions (SSCs) are according to OECD's methodology included into tax revenues (OECD, 2020). However, it is clear that the main difference between "common" taxes and SSCs is the fact that taxes are unrequited payments. The individuals, both the self-employed and employees (in case of employees also employers), have to pay SSCs all their working life. The pensioners' benefits provided by the government in the form of old age pensions are dependent on the amount of their earnings and hence the SSCs that were levied on them during the relevant period (Blechová, Janoušková and Sobotovičová, 2014).

The application of SSCs within the European Union is governed by the Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security and Regulation (EC) No 987/2009 of the European Parliament and of the Council of 16 September 2009 laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems, as amended. These Regulations need according to results of the research made by Huete (2018) major reforms mainly related to charge the defrauded or evaded social contributions credits to the Social Security Administrations.

The SSCs and income tax on wages increase the labour costs (Bingley and Lanot, 2002 or Bieliková, Hakalová and Pšenková, 2018). Because for this reason the SSCs also affect macroeconomic indicators, the authors decided to devote their research to this area.

The aim of the paper is to evaluate by using the correlation analysis (1) the degree of dependence of the collection of the social insurance on the tax quota (a dynamic indicator), (2) the share of social insurance as a tax payment on the tax quota (a static indicator) and (3) the degree of dependence of the collection of the social insurance on the unemployment rate in the Visegrad Four countries.

1.1 Literature Overview

There were made several studies that dealt with SSCs incidence in the European Union countries. For example Cristea and Zeti (2019) made a research in the seven Member States, specifically Austria, Bulgaria, Germany, Hungary, Poland, Romania and Spain. They found out that there is a positive correlation between total SSCs and the unemployment rate, as well as a negative relation between total SSCs and the employment rate. Adam, Phillips and Roantree (2019) focused their study on the impact of the SSCs 35 years of policy reforms in the conditions of United Kingdom between the years 1978 and 2015. The results of the study show that reduction in marginal rates of employee has positive effects on labour costs. Moreover, they brought an evidence that employees change their hours of work in response to SSCs. On the contrary, the study made by Müller and Neumann (2017) in conditions of the West Germany in the period from 1975 to 2010 concludes that neither employers nor employees shift a substantial part of their SSC burden because there was not found any evidence for labour supply responses and no significant discontinuities in gross earnings distributions.

2. Problem Formulation and Methodology

Following the main research results summarized in this field, the question is whether there is a correlation between the level of the tax quota, the share of SSCs on the tax quota, the unemployment rate and the amount of SSCs collection.

The methodology is based on the following assumptions:

- (i) when unemployment decreases (U), social security contributions (SSCs) increase, i.e. schematically: $\downarrow U = \uparrow \text{SSCs}$;
- (ii) when wages increase (w) social security contributions (SSCs) increase, i.e. schematically: $\uparrow w = \uparrow \text{SSCs}$;
- (iii) while meeting the presumptions (i) and (ii) for *ceteris paribus*, the share of the tax quota constituted by the social insurance (TQ_{SSC}) on the total tax quota (TQ) should be increased.

In order to achieve the article objectives of the standard positivist economic methodology involving description methods, comparison, deduction, synthesis and analysis is used. For assessment of dependency between analysed variables methods or correlation analysis is used. The various quantitative methods are used in her empirical research by e.g. Staničková (2018).

In a formalized way, the calculation of the correlation coefficient r between the variables x and y can be represented according to Brase, Brase and El-Iraki (2019) by (1),

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}, \quad (1)$$

where \bar{x} and \bar{y} are averages of the character x , or y .

Since the value of money changes over time (Shah, 2006), the collection of SSCs in the currency of the relevant country must be converted at the same time using (2),

$$FV = PV \cdot (1 + i), \quad (2)$$

where FV is the future value, PV present value and i inflation rate.

2.1 Data

The input data for the dependence analysis of selected indicators are shown in Table 1. These data are presented for the purpose of dependence analysis in the table for the period of six years for the given Visegrad Four countries – the Czech Republic, the Slovak Republic, Poland and Hungary. The analysis covers the period from 2013 when the solidarity tax increase was introduced in the Czech Republic to 2018 for which the latest data were available. Indicators whose interdependence is examined include the tax quota (TQ), the share of SSCs collection on the related country's tax quota (TO) the unemployment rate (UN) and the recalculated amount of SSCs collection for the year concerned to the price level of 2018 (SSCs). The recalculated collection of SSCs is stated in the relevant national currency of the state.

Table 1: Input Data

State	Czech Republic				Slovak Republic			
Year	TQ	TO	UN	SSCs	TQ	TO	UN	SSCs
2018	35,3	15,6	2,3	833 855	33,1	14,1	6,5	13 435
2017	34,9	15	2,9	777 757	33,1	14,1	8,1	12 765
2016	34,2	14,7	4	724 136	32,3	13,7	9,7	11 762
2015	33,3	14,4	5,1	684 792	32,1	13,4	11,5	11 145
2014	33,1	14,5	6,1	651 804	31,1	13,1	13,2	10 446
2013	34,1	14,7	7	700 638	30,3	13	14,2	10 207
State	Poland				Hungary			
Year	TQ	TO	UN	SSCs	TQ	TO	UN	SSCs
2018	35	13,1	3,9	298 829	36,6	12	3,7	5 250 862
2017	34,1	12,8	4,9	280 038	38,2	12	4,2	5 138 637
2016	33,5	12,7	6,2	260 121	39,1	13,1	5,1	5 112 946
2015	32,4	12,4	7,5	244 885	38,7	12,8	6,8	4 764 103
2014	31,9	12,1	9	229 025	38	12,5	7,7	4 465 708
2013	31,9	12,2	10,3	224 777	38	12,7	10,2	4 248 680

Source: Eurostat (2019), OECD (2019), Šíroký, Krajňák and Krzikallová (2019)

The input data in Table 1 show that the tax quota is the highest in Hungary, while Slovakia has the lowest values. Hungary was the only one to experience a decline in its tax quota in recent years. In contrast, in other countries there is an increasing trend. The lowest registered unemployment rate is in the Czech Republic all along, but this shows the highest rate of share of SSCs on the tax quota.

3. Problem Solution

The resulting values of the Pearson correlation coefficient r for the analyzed Visegrad Four countries from the input data from Table 1 for the period 2013–2018 are shown in Table 2. The calculations were made at the 0.05 significance level, which is recommended e.g. by Brase, Brase and El-Iraki (2019).

Table 2: Correlation Matrix of V4 Countries

Czech Republic	TQ	TO	UN	SSCs	Slovak Republic	TQ	TO	UN	SSCs
TQ	1,00				DK	1,00			
TO	0,92	1,00			TO	0,96	1,00		
UN	-0,77	-0,75	1,00		UN	-0,96	-0,96	1,00	
SI	0,97	0,95	-0,87	1,00	SI	0,94	0,98	-0,99	1,00
Poland	TQ	TO	UN	SSCs	Hungary	TQ	TO	UN	SSCs
TQ	1,00				DK	1,00			
TO	0,99	1,00			TO	0,77	1,00		
UN	-0,96	-0,96	1,00		UN	0,22	0,47	1,00	
SI	0,99	0,98	-0,98	1,00	SI	-0,15	-0,37	-0,98	1,00

Source: own calculation

In the case of the Czech Republic, the highest degree of direct dependence is between the tax quota and the SSCs collection. It can therefore be stated that with the increasing tax burden, the collection of SSCs also increases in proportion. The highest indirect dependence is between the unemployment rate and the SSCs collection. In a period of high unemployment, unemployment benefits are paid, thus SSCs collection decreases, on the contrary, when unemployment is low, the SSCs collection increases. This confirms the conclusion of the study (Beland and Koreh, 2019) that social insurance is a good automatic stabilizer in the economy.

The same type of dependences also exists in the case of correlation analysis for the Slovak Republic. In comparison to the Czech Republic, all correlation coefficients exceed value 0.9, which means a very high degree of either direct or indirect dependence between the selected pair of observed indicators. The highest value of the coefficient r is between the unemployment rate and premium collection. Another conclusion from this analysis is the fact that tax quota increases when unemployment falls and conversely tax quota increases when unemployment increases. These conclusions can be identified with the results of Pissarides (1998) confirming the importance of not only social insurance but also taxes as a tool of state fiscal policy. Kukalová, Moravec, Ječmínek and Martášková (2018) proved statistically significant changes in tax mix as a reaction of fiscal policy makers on the financial crisis.

Correlation coefficients analyzing the degree of dependence of the analyzed indicators in Poland also show high degrees of dependence. The correlation matrix for Hungary shows different results. There is almost no dependence between the tax quota and the SSCs collection. Also the low degree of dependence is between the unemployment rate and the tax quota. Of all the countries analyzed, the Hungary is the only one where both the total tax quota and the partial tax quota for social insurance are decreasing. This is the main reason why in some cases there is not almost direct dependence between the selected pairs of indicators, as was the case for the remaining V4 countries.

4. Conclusion

The aim of the article was by using the correlation analysis to evaluate the degree of dependence of SSCs collection on the tax quota, the share of SSCs as a tax payment on the tax quota and the unemployment rate in the Visegrad Four countries. SSCs payments make up a significant part of the tax burden in all Visegrad Four countries and are also a significant revenue component of the state budget. This fact is confirmed by Pearson's correlation coefficients, which in all cases, express a very high degree of direct dependence between the tax quota and the SSCs. Further confirmation of this conclusion is expressed by the high degree of direct dependence between the share of SSCs on the tax quota and the collection of SSCs.

On the contrary, a high degree of indirect dependences exists between the unemployment rate and the SSCs collection. With rising unemployment the SSCs collection declines, confirming the importance of social insurance as an important fiscal policy instrument of the countries that were analyzed.

The field of social insurance is not very harmonized within the European Union countries as well as the whole field of direct taxes. This is confirmed by the input data for the analysis, as the indicator expressing the share of SSCs on the tax quota does not acquire the same value. The highest share in the last analyzed year was recorded in the Czech Republic (15.6%), while in Hungary it based on 12%. Examination of possible changes in SSCs, not only in the Visegrad Four countries, but in all European Union countries could be the subject of further research in this field, which would include an extension of the analyzed factors.

The future authors' research could consist at extending the length of the time period or increasing the number of countries for the analysis, which would then allow comparing the findings with the results of this study, leading to a further expansion of scientific knowledge in this field.

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Cluster Policy in Poland: a Tale on Putting Theory into Practice

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Abstract

As time progresses and the context changes, the approach to adopted economic policies evolves. In some cases the changes are endogenous in nature, in others they are a result of exogenous forces. The latter is the case of cluster policy in Poland. The idea behind its implementation came from the European Union during the process of the country's accession. Throughout the years the Polish approach to cluster policy has been transforming and this paper constitutes an attempt at presenting the historiography of cluster policy in Poland. By examining relevant literature and based on a proposed framework of three phases of cluster policy evolution – “the embryo phase”, “the golden age”, and “the decline and reinvention” – the paper tackles the following questions: what were the reasons behind its implementation? How has it developed over time? What lessons can be drawn from the Polish experience?

Keywords: cluster, cluster policy, European Union, Poland

JEL Classification: L50, L52, O25

1. Introduction

Sound theory needs good practice and good practice does not exist without sound theory. Moreover, when applying theory into practice many issues arise and in some cases practice leads to theory being further developed. Such is the case of clusters and cluster policy. Both have, over time, gained much attention from researchers and policymakers. The reason behind it is that clusters are believed to be the driving force of various positive externalities (Kuberska and Grzybowska-Brzezińska, 2017). This argument was the main reason behind the implementation of this concept to the policy agenda, especially in the EU.

Cluster policy is defined in various ways. It can be understood as “an expression of political commitment, composed of a set of specific government policy interventions that aim to strengthen existing clusters and/or facilitate the emergence of new ones” (European Commission [online], 2016). It can also be defined as a policy “pursued by public actors for the purpose of increasing socio-economic benefits through the creation or further development of clusters” (Andersson et al [online], 2004). Havierníková (2018) defines it as “a specific governmental effort to support clusters”. What most cluster policy definitions have in common is its main goal which is supporting clusters. However, they do not specify what this support consists of and what dimensions of cluster development are targeted. Every cluster policy is therefore a result of a government trying to figure out the best approach by designing, implementing, monitoring, and evaluating it accordingly. Given that the beginnings of the first cluster policies date back to the late 1980s and the early 1990s most governments pursuing them have already gone through various stages of cluster policy development. Poland's experience with cluster policy started just before the end of the 20th century and was strongly influenced by the EU.

This paper is meant as a historiography of cluster policy in Poland. As a result of the process of joining the EU the approach to industrial interventionism in Poland changed. This translated into a new era of shaping economic development where a strong emphasis on adequately supporting clusters as important ecosystems, through which desirable outcomes can be generated, has become its attribute. The paper first describes the linkages between cluster policy and industrial policy as well as innovation policy. It then explains the theoretical scope of cluster policy and the meaning behind clusters, cluster initiatives, and cluster organizations. The following part contains the analysis of the trajectory of cluster policy development in Poland. Ultimately, through this paper the author compiles a set of lessons which should be drawn from the Polish experience that could contribute to a better understanding of the mechanisms behind cluster policy implementation which could then translate into more successful economic interventions.

2. Theoretical Background and Literature Overview

Clusters are the core concept of cluster-led development which assumes that without strong clusters economies do not flourish. This belief convinced policymakers, especially across the EU, to initiate and follow interventionist policies that support them. It is of utmost importance that cluster policies are designed according to the circumstances in which they are implemented. Thereupon, they need to be audited and, when required, they need to be altered. As Fløysand and Jakobsen (2011) describe both cluster evolution and regional development: both processes are complex, multilevel, and not predictable or standardised.

Conducting cluster policy is a clear manifestation of interventionism. As there are no impassable boundaries between most economic policies in many cases some sort of an overlap occurs between them. Cluster policy is rooted in science and technology policy, industrial policy, and regional policy (Sternberg, Kiese and Stockinger, 2010). In particular, it is closely associated with industrial policy as clusters are built around industrial linkages. Therefore, when impacting clusters certain industries are, either more or less directly, or more or less explicitly, affected. On the other hand, effects targeted through industrial policy can also impact clusters. For the abovementioned reasons both policies are strongly embedded in one another (both at conceptual but also operational level). Consequently, through cluster policy industrial policy has come full circle from an era of being objectionable to an era of being acceptable or even strongly advocated for. Cluster policy is also strongly embedded in innovation policy. Given clusters' role in the innovation ecosystem the arguments behind cluster policy are on par with the arguments in favour of innovation policy. Innovation policy agenda brings benefits to clusters and through cluster policy governments engage in activities that could help them achieve other economic goals.

The extent of cluster policy varies across locations. Firstly, impacting clusters does not necessarily have to take a form of an explicitly formulated policy. As previously mentioned, other economic policies can have a meaningful impact on clusters, especially if they have a positive impact on the business environment in which clusters operate. Secondly, when an explicit approach to cluster policy is employed, governments can choose what scope of impact they are aiming at. This scope can have different width and depth. For example, governments can follow an industry-neutral or industry-specific approach.

Another dimension of the scope of cluster policy refers to which cluster structures are targeted within the cluster policy agenda: clusters and/or cluster initiatives and/or cluster organisations. In a now-classic cluster definition Porter (2008) characterises them as “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies,

and trade associations) in particular fields that compete but also cooperate". In another definition, he and his co-authors bring out the importance of various relations established within clusters by defining them as "geographic concentrations of industries related by knowledge, skills, inputs, demand, and/or other linkages" (Delgado, Porter and Stern, 2014). Moreover, the same group of authors proposes an operational definition of clusters understood as "groups of industries with high levels of co-location in terms of employment" (Delgado, Porter and Stern, 2012). According to Maskell and Lorenzen (2004) clusters are "non-random geographical agglomerations of firms with similar or highly complementary capabilities". All in all, clusters should be understood as agglomerations of companies as well as related and supporting industries that engage in competition and cooperation and simultaneously establish meaningful linkages with research and educational institutions and other ecosystem participants. However, what most cluster definitions lack is the incorporation of customers or consumers into the cluster equation. Kuberska (2018) proposes that, given their role in building competitive advantage, they should also be recognized as vital for cluster development.

Cluster development is a natural process and occurs without any institution's deliberate involvement. However, it can also be influenced by actions undertaken by various stakeholders. In such case, impacting clusters takes place through cluster initiatives which are "organized efforts to increase the growth and competitiveness of a cluster within a region, involving cluster firms, government and/or the research community" (Sölvell, Lindqvist and Ketels, 2003). Similarly, Kordoš (2018) defines them as "organized efforts by governments or firms to increase clusters' growth and competitiveness". Whereas, Fránková (2016) classifies cluster initiatives as an innovation policy instrument.

Finally, cluster organisations are another type of structures that can be targeted within cluster policy framework. Fundamentally, these are specialised institutions that run cluster initiatives. Their main goal is to provide support to clusters and cluster initiatives which takes place when a group of cluster participants establishes a platform of cooperation. They can be formed at different stages of cluster development. It is therefore crucial to adjust the vision of the cluster organization, its aims as well as actions to the stage of cluster life cycle.

Another dimension of cluster policy concerns the geographic level at which it is implemented, which could be local, regional, national or supranational. Different locations have different experience regarding this dimension. For example, in some cases it is the regional government that introduces cluster policy before the national government. The Basque Country is the epitome of such case. It was one of the first European regions to implement cluster policy independently of its national government's agenda as the evolution of this region's cluster policy dates back to 1989 (Konstantynova 2017). However, in some cases the call originates at another level. Such is the case of Poland where implementing cluster policy was a consequence of the EU institutions' guidelines.

There are more cluster policy dimensions than the ones discussed above. Given the peculiarities of every economy, establishing a one-size-fits-all approach to cluster policy is impossible. The significance of uncovering what lessons can be drawn from different cluster policy cases cannot be overstated. As with any policy the stakes are high and so are the risks of making the wrong decisions. Therefore, in the remaining part of the paper the author wishes to unfold the process in which clusters in Poland from being a solely theoretical concept were turned into a policy tool.

3. Problem Formulation and Methodology

Although the cluster concept has been picked up by many governments, there is still not enough evidence on the nature of these interventions as well as their impact (Uyarra and Ramlogan, 2017). Filling this knowledge gap by conducting research on different aspects of cluster policy should allow to find arguments either supporting or rejecting Martin and Sunley's view that cluster policy was implemented ahead of various conceptual, theoretical, and empirical issues (Martin and Sunley, 2003). As Arthurs et al (2009) put it "knowledge of clusters is thus still highly fragmented, very descriptive, often qualitative, and inconclusive on many points". Expanding the knowledge on any aspect of cluster policy is particularly important from the EU perspective. The European institutions as well as national and regional governments have put much effort into cluster policy implementation. Today, as they are in the process of designing their future policies, they should be equipped with data and facts on how clusters underwent their transformation from being a solely theoretical concept to becoming an element of kaleidoscope of economic policies.

This paper constitutes an attempt to grasp cluster policy development trajectory in Poland. Through previously conducted research, the author concluded that not only initial but also later efforts leading to the introduction and development of cluster policy in Poland were exogenous in nature and were particularly impacted by the EU accession. Consequently, the narrative in this paper follows a cluster policy development framework consisting of three consecutive phases whose turning points coincided in time with major political events. The first phase covers the time preceding the EU accession in 2004 as well as the years 2004–2006. Due to the nature of the activities undertaken during this time, the author proposes to denominate it as "the embryo phase". For the same reason the two remaining phases are denominated as "the golden age" and "the decline and reinvention" and cover the years 2007–2013 and 2014–2020 respectively. The turning point that separated them was the introduction of the new funding architecture for the 2014–2020 programming period.

4. Problem Solution

The cluster concept was first introduced in Poland as a consequence of various efforts made by international institutions and organisations. Its implementation started in the late 1990s. When in 1994 Poland gained its status of a candidate country it became clear that its future economic policies will take the EU perspective into consideration and with time it will lean towards duplicating the ideas, actions, and policy tools recommended by Brussels. One of the first actions introducing the cluster concept took place in 1998 when the Polish Foundation for SME Development and Promotion coordinated a project financed by Phare STEP-1 aimed at training a network of brokers for future SME clustering/networking. However, due to a lack of a follow-up, especially financing opportunities, after the programme had finished no long-lasting results materialised. Some time later the cluster concept started gaining momentum in the EU with the introduction of the Lisbon Agenda. That is when more attention was paid to two types of activities within the cluster policy framework. First, it was obvious that the idea of clusters is not widely recognised within the EU. It was necessary to focus on positioning clusters in the minds of key stakeholders. Second, it was imperative to verify which countries and regions have already established cluster policies and to identify similarities and differences between them. In 2001–2002 a LEED/CEI/EBRD Project on Industrial Districts and Local Clusters: Clusters in Transition Economies – Strategies for Innovation and Growth at a Cross-National Perspective was carried out in five candidate countries (the Czech Republic, Hungary, Poland, Slovakia, and Slovenia). The project featured five seminars whose main aim was to raise awareness of the cluster concept (Ionescu and Möhring [online], 2001). During "the

embryo phase” first attempts at cluster mapping in Poland were made (e.g. Szultka, 2004) and the number of cluster organisations was slowly rising. All in all, before 2007 different actions were meant as opportunities to bring the idea behind cluster-led development into the policy agenda as well as familiarise different actors with the nature of the concept. However, it was not some time after the accession that cluster policy jumped into a higher gear.

Visible changes came with the 2007–2013 programming period. Cluster policy during this time was visibly positioned under the umbrella of innovation policy whose foundations were laid out by the Ministry of Economy in the “Directions for Increasing the Innovativeness of the Economy in 2007–2013” (Ministerstwo Gospodarki, 2006). Under the objective of improving the conditions of the operations of innovative enterprises the strategy aimed at supporting joint networking activities of entrepreneurs aimed at implementing innovative projects. At the beginning of “the golden age”, based on qualitative indicators, Poland was identified as a country with non-existent cluster policy at local and regional level. National government’s involvement in cluster policy was described as “catalytic” (meaning that it tried to bring players together to create networks but, at the same time, provided limited support or direction). In turn, the EU’s impact was identified as “supportive” (meaning catalytic as well as making cluster-specific investments in infrastructure, education, training or providing passive promotional support) (European Commission [online], 2007). This new EU programming period brought various funding opportunities and with that cluster policy became more prominent both at a national and regional level. During this time, different institutions were signalling their support to cluster initiatives and cluster organisations. At the national level it was the Ministry of Economy and the Polish Agency for Enterprise Development (PARP, a government agency subordinate to the Ministry of Economy) that assumed their roles as institutions shaping cluster policy. PARP played a particularly significant role during this time managing initiatives that supported establishing cluster organisations as well as already functioning ones as well as conducting cluster benchmarking studies in 2010, 2012, and 2014. During this time the financial support could be received e.g. to finance cooperation (domestic and/or international), to promote, to improve qualifications of cluster organisation’s coordinator (as well as entities operating within the organisation) but also to finance activities increasing cluster’s innovativeness. At the beginning of the 2007–2013 period several programmes financing cluster development were already in place within the national cluster policy framework. They included but were not limited to: Training Programme Promoting Clustering (Program szkoleń promujących clustering), Pilot Project “Support for Clusters” (Program pilotażowy “Wsparcie na rozwój klastra”), Operational Programme Innovative Economy (Program Operacyjny Innowacyjna Gospodarka), and Operational Programme Human Capital (Program Operacyjny Kapitał Ludzki).

When it comes to regional cluster policy it was coordinated by the Ministry of Regional Development along with Marshal’s Offices (regional self-government organizational units). Every Marshal’s Office established a Regional Operational Programme which was a development programme where cluster policy could potentially be one of its components. Regions were given a certain degree of autonomy and, consequently, their approach to cluster support differed. Cluster organisations gained much importance in regional policy agendas when they were included in Regional Innovation Strategies. Apart from the national and regional programmes it was also possible to receive support from Operational Programme for Development of Eastern Poland – a intraregional programme aiming to reduce the development gap between the east and the west.

In 2012 PARP published a report which contained recommendations on the directions and assumptions of future cluster policy in Poland until 2020. According to the report its main goal should be to strengthen the innovativeness and competitiveness of the Polish economy based

on the intensification of cooperation, interaction, and knowledge flows within clusters, and to support the development of strategic economic specializations (key clusters) (Dzierżanowski, 2012). The report initiated a shift in the cluster policy approach by recommending to support selected cluster organisations of key importance for the economy.

As a result of the efforts undertaken at both national and regional level, between 2007 and 2013 the number of cluster organisations was rising. This growth, aided by many opportunities created for cluster organisations, as well as active engagement of various government actors shaping cluster policy in Poland, are the main reasons behind naming this period of cluster policy development as “the golden age”. What is significant, cluster policy in Poland during this time focused on supporting cluster organisations rather than clusters. It was assumed that through cluster organisations spillover effects can be achieved which will reach other cluster participants that operate outside cluster organisations.

Even though between 2007 and 2013 cluster policy was actively pursued at both national and regional level, at the very beginning of the new programming period Poland did not have any national cluster policy programmes in place but was working on establishing them as clusters have been included in various economic strategies after 2010. This lack of continuity proves that cluster policy in Poland was to some extent lacking a strategy that would reach beyond the previous programming period. Regional cluster policy turned out to be particularly dependent on the EU framework and after 2014 it has not been as prominent as in the previous period. Most voivodeships have not established their regional cluster policies or actions that could constitute them (however, e.g. wielkopolskie voivodeship is an exception with one regional cluster programme). This shows that with a shift in the EU framework Polish regions did not continue their previous cluster policy agenda or develop a new approach and that in the previous period they were almost entirely dependent of the EU funding. This change in direction has had an impact on cluster organisations in Poland and a portion of them seized their operations (if assuming, following Skokan and Zotyková’s (2014) approach, that cluster policy’s success can be measured by the number of cluster organisations then in some regions the policies were less successful than in others). Another significant change occurred at the national level. As recommended by PARP in the abovementioned report from 2012, certain support tools are now designed and offered to cluster organisations which operate within the boundaries of so called “world class clusters”. Such elitist approach is aimed at making sure that support is directed to entities relevant from the point of view of the economy as well as taking their industrial specialisation into consideration. The national cluster policy framework has, therefore, become less horizontal. Currently, two cluster policy flagship programmes are the Key National Clusters Programme and the Internationalisation of the Key National Clusters Programme. They both target different objectives. The former has a broad orientation towards e.g. cooperation, innovation, entrepreneurship, whereas the latter is focused on internationalisation and visibility. According to a benchmarking study (Wielec [online], 2018) it is estimated that currently there are about 130 clusters and cluster initiatives in Poland and they represent the interests of a growing group of enterprises. To sum up, the changes that occurred within the 2014–2020 EU framework have been highly consequential for clusters and cluster organizations in Poland. Due to their nature, this phase can be denominated as “the decline and reinvention” where the word “decline” stands for the recession of the regional cluster policy whereas the word “reinvention” depicts the new fine-tuned approach to cluster policy at the national level.

5. Conclusion

Through growth and development strategies and programmes that operationalise them governments choose what types of interventions are best suited to assist them in their economic aspirations. However, when undertaking interventionist solutions, they are at risk that instead of overcoming market failures they are generating government failures. Nevertheless, they pursue them but with different results. Nowadays, in the EU a call for innovations is one of the most prominent ones. Certain aspects of its innovation policy as well as industrial policy are reflected in cluster policy as the three overlap at both conceptual but also operational level. Cluster policy has been implemented in many countries and regions. In Poland the approach to cluster policy has been strongly influenced by the architecture of the consecutive EU structural funds. Every seven years the EU policy framework is re-established and Poland, to this day, has gone through three of the them while simultaneously trying to figure out how to translate clusters from a theoretical concept into a successful policy practice. When analysing the history of development of the cluster policy in Poland it can be divided into three stages: “the embryo phase”, “the golden age”, and “the decline and reinvention”. The degree and scope of involvement of the national and the regional governments has fluctuated over time. The experience they have gained is invaluable and it can now assist them in designing and executing their future policy as certain lessons can be drawn from the past.

First and foremost, at the initial stage of cluster policy implementation every effort should be made to make sure that no misunderstandings occur at its conceptual level. A distinction between clusters, cluster initiatives, and cluster organisations is and should be obvious. This means that policymakers as well as institutions acting as executive bodies within the cluster policy framework should spread and promote the idea behind this policy in a way that does not impose any doubts as to the nature of the concept, the scope of the policy as well as the vision behind it. Another lesson which can be drawn from the Polish experience is related to policy continuity. Any policy should be legitimised in the overall policy framework as well as have a clear long-term strategy established. Moreover, any changes should be introduced after carefully rethinking the policy framework but while also keeping in mind that any discontinuity will impact the ecosystem which it targets. To finalise, what policymakers should also take into consideration is that cluster policy success depends on many factors and cluster development can be achieved through the pursuit of various actions. A policy framework in which supporting cluster organisations is its main component may not be sufficient in the long run. Other measures should be also taken into consideration. Moreover, as long as cluster policy remains to be only one of many components of innovation policy it is more probable that it may remain fuzzy and will not be as effective as desired, unless coordinated accordingly.

Further research into cluster policy, especially its effects, is imperative for numerous reasons and various stakeholders. Future research should focus on looking closely into the relationships established within cluster organisations. If supporting cluster organisations remains the dominant type of intervention then learning about cluster organisations’ dynamics as well as whether they create spillovers that reach beyond cluster organisations should be considered crucial in the research agenda, especially from the EU perspective.

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Analysis of the Causes of International Migration – Theoretical Approaches to the European Migration Crisis

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Abstract

Migration has accompanied the development of society since time immemorial; it is a natural part of it. In addition to the ongoing migration processes, often resulting from the natural life cycle, there are also leaps of migration caused by various factors, despite the undisputed transaction costs of migration. The aim of this critical analysis is to point out selected theoretical concepts explaining the dominant causes of migration waves, mainly through the perspective of economic theories, although no less interesting are sociological, political, geographic and environmental approaches. The main focus will be on Europe, which has changed from an emigrant's region to an immigration destination.

Keywords: *causes of migration, economic explanatory theories, Europe, migration*

JEL Classification: *F22, F52, J61, N90, O15*

1. Introduction

So-called the European migration crisis culminating in 2015-2016 has revived interest in the phenomenon of migration. The influx of more than 1.5 million immigrants to Europe alone during 2015 is beyond the normal migration flow, and the causes of such a large number of "refugees" have been investigated. In addition to empirical data, interest also turned to a potential theoretical framework for migration which is the subject of this paper. The theoretical framework is intended to help identify generally valid phenomena, thereby finding the prevailing causes. Then it is possible to try to propose system measures solving the analyzed problem. But so far Europe has not found a systemic solution to the migration crisis. In recent years, migration and immigration have become one of the most watched topics (Brzozowski, 2019: 584). The spectrum of theoretical approaches is quite broad and very often includes sociological, political and economic concepts. The focus of this study is primarily, but not exclusively, economic or societal theories.

2. Theoretical Framework of Analysis

Most migration theories are not theories in the true sense of the word, as they often lack general validity or do not have both explanatory and predictive functions. Therefore, they are often rather concepts or models with a certain degree of generality (Drbohlav and Uherek, 2007: 1). To understand the causes of the "European Migration Crisis", some theories/concepts that could prove validity have been selected. It is not, therefore, an exhaustive overview of the theoretical framework, but of those concepts that can best explain the reasons for the migration run to Europe. It will not only focus on purely economic theories, but also sociological,

possibly political science. It is necessary to think in terms of complementarities and to use a multidisciplinary approach to the issue using knowledge of coexisting theories (Palát, 2014).

2.1 Ravenstein's Laws of Migration

One of the first theories concerning migration was formulated at the end of the 19th century by Ernst G. Ravenstein responding to the changes in population movement caused by the industrial revolution. Not all attributes are valid even in the migration crisis analyzed by us, but of the seven rules, three to four can be confirmed: migrants prefer larger cities as their destination; it is the rural population that is more inclined to migrate; mainly young people, not families, predominate are adults (Ravenstein, 1889), although at present they often pretend to be minors – juveniles. European social systems provide a higher level of protection for children and adolescents – this is the real reason for their increased numbers.

2.2 Neoclassical Theory, Push-Pull Theory

There is a widespread neoclassical theory focusing on factors leading to the willingness to leave their country on the one hand and on the other hand what attracts them to their destination. The spectrum of push factors is wide (16) and includes population boom (overpopulation), low standard of living, lack of work, natural disasters, political repression, ethnic, religious instability. On the other side of the equation there are several (9) pull factors luring to move - work, better living conditions, political stability, freedom, geographical proximity, land availability,...(Lee, 1966, Jansen, 1969). In essence, it is possible to identify four basic categories of the causes of emigration - economic, security, cultural, incl. religious, environmental. Sometimes the push-pull theory is presented as a separate, sometimes as part of neoclassical economics. Like classical political economics, push-pull theory measures costs and revenues.

Neo-classical theory, push-pull model of migration is complemented by concepts of new labour economics, societal approaches and decision-making processes (Nestorowicz and Anacka, 2019: 295). In the context of the development of globalization, terms such as mobility and population redistribution also appear in connection with migration (ibid, 302), which, however, cannot be linked to the causes of the European migration crisis.

2.3 Macro Theory of Migration

Neoclassical theory is closely related to the macro theory of migration, which focuses on issues of economic maturity of countries, real standard of living, possibilities of work and measures differences between states. While in the source country of migration there is an excess of labour supply; high unemployment rate; it is often a heavily undercapitalized economy with a very low wage level and hence a low standard of living, then the target country offers opportunities for many. While it is true that this macro theory assumes gradual equalization of wage levels and ultimately the overall standard of living (Massey, 1993), however, this prediction remains only in the theoretical field. We do not have statistical data to confirm this premise, but it is clear that immigrants reduce the wage level in the target country - see the following text.

2.4 Dual Labour Theory

Another related approach is the dual labour market theory, which assumes segmentation of the labour market into primary and secondary (Kerr, 1954). The labour market is divided into a

primary one comprising highly skilled labour, high wage experts and a secondary one that offers unskilled low wage positions and near-zero career growth opportunities. Thus, international migration is a consequence of the constant demand for labour in developed countries. But the problem is that less skilled workers are willing to work at lower wages, which leads to labour market tensions. Kerr talks about the Balkanization of the US labour market (already in the 1950s!). The same objections are periodically raised in Europe, including the Brexit referendum (Kučerová, 2018: 871). The existence of labour market segmentation in advanced economies is actually the cause of migration to these countries (Piore, 1979). Even a more skilled labour force leaves their homeland because they cannot find adequate job opportunities they find in wealthier states (Koyama, 2018: 836).

2.5 Cumulative Causation Theory

The concept of cumulating causation is also related to labour market segmentation. In the target, more advanced economy, social labelling is a stigmatization of some professions, where professions with a high proportion of migrants are perceived as unsuitable for domestic workers, so the demand for migrants continues to grow. Overall, this is a perception of migration as an evolutionary phenomenon that changes the environment in both the target and the source countries (Drbohlav-Uherka, 9; Massey 2003). The problem is that migration changes the socio-cultural integrity of the source society; with its effects contributing to the emergence of a “migratory culture”, as the future of young people is primarily seen as an opportunity for emigration (Stojanov, Gladišová, 2011: 25).

2.6 New Economics of Labour Migration (NELM)

The New Economics of Labour Migration – new economic approach is a variation of the neoclassical theory incorporating societal aspects in the decision process about migration (EC, 2018). Immigration considerations are not purely on an individual level, but within the broader family or community. The result is a collective decision. The aim is not only to maximize the benefit of the whole family / community, but also to minimize the risks to family / community capital. In this case, the migrant is always a working type; he is the emissary of the family under its control. Emigration is an act of social division of labour within the family or wider community. The migrant then sends a part of the earnings home in the form of remittances, which thus become a source of family income, they can serve as an input capital for business, or as a form of social security. Decision about potential migration is a strategic behaviour of families (Stark, 1991, Massey, 1998).

2.7 Network theory

The new economics of labour migration is followed by the sociological theory of networks, which focuses on the role of interpersonal links in migration. Every migration creates new social capital (Drbohlav, 2001: 7), which is an impulse for further migration. Family-community ties act as channels of information about the conditions of migration. Social networks allow the help of already established immigrants in the target country to new arrivals from their home country, resp. directly to the community. With their help they develop their own social and economic networks, which reduce the cost not only economic, social, but also emotional (Drbohlav and Uherka, 2007: 7). Exceeding the critical migration threshold reduces the costs of further migration, thus providing an impetus for further home leaving (Stark, 1991: 33). Social networks should also function as last-rescue networks if necessary (Henig, 2007).

2.8 Institutional theory

Institutional theory of migration is also suitable for the analysis of the European migration crisis. The focus of its attention is not the causes of migration as such, but the factors that facilitate it. If it has long been apparent that migration is becoming more institutionalized and the underlying causes are diminishing (Massey, 1998, Jennissen, 2000), in recent years we are talking directly about the migration industry. We can identify two basic categories of actors in the migration industry, the smuggling gangs that abuse trafficking internationally; and NGOs, an international organization providing social services, counselling. The focus of attention is therefore on the institutions that are emerging in the migration industry and what role they play in migration (Henig, 2007).

3. Problem Formulation and Methodology

Although migration is an immanent attribute of human life, societal development, the flushing of migrants on the borders of Europe (and the US) has been alarming in the last decade. Not all theoretical concepts of the so-called European Migration Crisis are applicable, hence their selection. An important point of view is their verifiability in a given problem, their applicability. Methodologically, it is a qualitative analysis of the theoretical concepts used - finding a common denominator for application to the European migration crisis, interpretative analysis - i.e. an effort to understand the lived experience.

The causes of the migration crisis of the second decade of the 21st century are many, but with common denominators - a sense of imminent danger, disillusionment, a feeling of uprooting, inability to support themselves, lack of work, poverty.

The Arab Spring was a significant impetus for emigration. The triggering mechanism in December 2010 was the self-immolation of a Tunisian vegetable vendor desperate for unemployment, poverty and government obstruction. Protest demonstrations then spread in early 2011 to ten other Arab countries. Subsequent efforts by authoritarian rulers to suppress protests forcefully increased security risks for the population, deepening economic instability to such an extent that the floodgates of emigration opened. A civil war has continued in Libya, Syria and Yemen to this day.

The causes of the outbreak of the Arab Spring are political, economic, social and demographic. The primary political reasons were the division of the Middle East after the First World War according to the Sykes-Picot Plan from 1916, regardless of ethnic or religious boundaries. Adding to the authoritarian regimes that are typical of most Arab countries, the feeling of injustice and the inability to change politics has only increased over the century. The very robust population growth after 1945, together with the renaissance of fundamental Islam since the late 1980s, for which any birth rate regulation is unacceptable, has led to demographic overpressure. The result was high youth unemployment. The absence of social systems led to social and economic exclusion. These are the root causes of emigration from countries affected by the Arab Spring.

But not only Arab Spring, since 2014, the number of economic migrants from sub-Saharan Africa has increased significantly (Kovářová, 2018: 822). It was for similar reasons - economic problems, misery, negative expectations, and on the other side, the chance to try life in a "dream paradise – Europe".

After some European countries were willing to accept refugees from the war or riots hit by the Middle East, smuggling gangs began to expand, which were already organizing trips to dream peaceful life in Europe without any scruples. And economic migrants from Central Africa,

often posing as war refugees, began to increase in the migrant flow. The friendliness of German Chancellor Angela Merkel and her "we can do it" led to the culmination of immigration in 2015, when 1.5 million migrants arrived in Europe.

However, besides war refugees, political exiles, economic migrants, people fleeing from areas of long-term conflict - Afghanistan, Iraq, etc. - cannot be overlooked.

4. Problem Solution

The influx of immigrants to Europe in 2014-2017 was truly enormous and caused many problems for European states. Logically, the worst are the liaison countries and their regions in the Mediterranean, but Germany, Britain and Sweden are the most desirable destinations. Unfortunately, not only their friendly social systems played a sad role in the choice of destination, but in the case of Britain more historical ties, but also smuggling gangs that promised migrant clients "way to the moon and back", i.e. inadequate social guarantees for anyone. The image of paradise on Earth was often associated with a car and house for every migrant if presented as a refugee before the war. Therefore, since 2014, the number of economic migrants from Sub-Saharan Africa has increased significantly (Kovářová, 2018: 822). Considering the fact that the number of immigrants is dominated by independent young men, one of Ernst Ravenstein's laws is confirmed, as is the assumption of a rather rural citizen. Another verification is their preference of large cities and especially large, strong economies - Britain, Germany, and Sweden. However, it should be noted that Ravenstein analyzed migration flows as a result of the 19th century industrialization, not in connection with wars or organized migration business of the 21st century. Therefore, at present the prevailing age around twenty is beyond his theories. Young people and children also began to prevail in migrant groups compared to normal practice (Kovářová, 2018: 827).

The validity of the neoclassical theory, the push-pull theory is imminent. Classical push factors are: lower political freedom, repression, population overpressure, unemployment, low standard of living, and low expectations of life. All this was a major factor in the Arab Spring, and this also applies to countries staggering in long-term conflicts. On the other hand, pulling factors such as political stability, economic prosperity, often mythical information about social guarantees are worthwhile for people considering emigration. Similarly, the development of the migration crisis corresponds to the macro theory of migration. Migrants' demand for stability and labour supply corresponds to neoclassical theory.

The ever-increasing demand for work in developed countries, in this case the European ones, is a strong motivation for leaving home, where labour supply is well below demand. These migrants are then willing to work at significantly lower wages than the European workers, thus reducing overall wage levels. The development then leads to a clear segmentation of the labour market, where ultimately none other than immigrants perform the less paid profession. In the end, the target country becomes a hostage for immigrants, as some sectors cannot do without them (Kučerová, 2018: 873). The dual labour market theory is thus confirmed in this case as well.

The New Economics of Labour (NELM) introduces an element of collectivity into emigration decisions. This is not just an individual decision, but a choice of a wider community, including cost sharing; assuming shared future returns in the form of remittances. This can only be confirmed to some extent for economic migrants from the Sub-Saharan region of the analysis period, as many were indoctrinated by the prospect of easy social security that they were supposed to share with their family / community through remittances. That is, not income from work, as this theory assumes, but from social benefits. In any case, it is a significant

strengthening of the social phenomenon of migration (Pisarevskaya, Levy, Scholten and Jansen, 2019). In this case, it is the communities that decide on the migration of individuals (de Haas, 2010: 243-245).

As a specification of NELM, its elaboration appears to be network theory. Relatives or members of the community established in Europe who can help not only with information, but also materially (housing, work), socially (socialization), as well as institutionally (assistance with legitimacy of residence or social benefits). Social networks act as intermediary links, but also as a safety net if necessary. So-called the critical boundary of migration from a particular community not only significantly reduces the cost of migration other people, but actually supports it (Stark, 1991: 33). However, in the European migration crisis, social networks tended to be confirmed to true war refugees from the Middle East who were running for the happier family members; who had already received protection in Europe. Economic migrants from Africa or people fleeing from areas of long-term conflict have not confirmed this significantly, as their compatriots have not yet established themselves in Europe.

So far, organizations focusing on the realization of migration flows have never been so numerous in peace conditions as in the past decade. It is indeed a migration industry with all the trimmings: marketing (creating and disseminating propaganda about the advantages of Europe as a destination); organization of access channels; organization of transport of migrants. Current migration to Europe (but also to the US) is increasingly institutionalized and the underlying causes in decision-making may diminish. The migration industry has become very lucrative, stimulating an increase in its supply further. Unfortunately, even under any conditions of transport of migrants, many deaths due to ignoring elementary safety standards speak of this - whether by sea or road. The smuggling gangs only maximize profit. The total smuggling sales are estimated at USD 3-4 billion, at least USD 6 billion only in 2015; estimate the net profit of the smuggling gangs is around 3 billion USD (TÝDEN.cz, 2017).

The concept of social networking does not apply here, since they are external entities. Unfortunately, trafficking in human beings is not only a question of the bitter history of the slave trade. On the other hand, many organizations have emerged to help refugees or migrants in general to alleviate migrants' difficulties, often in conflict with the national interests of some European countries. In any case, the institutional theory of migration manifested itself in full force.

5. Conclusion

Regarding the current debate on migration in general and the so-called European Migration Crisis, it is probably too early to evaluate it, but a qualitative analysis of selected migration theories with an attempt to interpret it in an explanatory way suggests a mainstream approach to recent migration developments. Especially the economic and sociological theories were confirmed. It is interesting that the oldest, more than 130 years old, model of the migrant behaviour of the geographer Ravenstein is valid even in this situation.

Neither microeconomic theories nor the global impact of migration in the 21st century have been used in the context of the European migration crisis, although it offers interesting shifts in perception.

The topic of the migration crisis development itself was not the subject of this analysis; it may be subject to further research - such as elaborating historical flows of migration confronted with possible theoretical approaches.

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The European Union - Japan Strategic Partnership. Implications and Perspectives for the Visegrad Group

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Abstract

The paper is devoted to strengthening political-economic relations of the EU and Japan at the level of a strategic partnership in times of worries about the future of open liberal market space and economic globalisation. Next to boosting its bilateral trade, the geo-economics of EU-Japan strategic convergence is expected to bring catalysing effects on trade liberalisation, labour, climate and consumer protection with positive externalities on global economy such as promoting values, principles and fairness. Since the Economic Partnership Agreement has entered into force in 2019, more opportunities with Japan have also been open to initiatives, commercial subjects and industries in the Visegrad Group - the regional cooperation framework of Czechia, Hungary, Poland and Slovakia since 1991. This paper praises the scope and timing of the EU-Japan strategic partnership at the turn of a third decade of the 21st century and addresses the implications and perspectives of the Visegrad Group.

Keywords: European Union, geo-economics, Japan, strategic partnership, Visegrad Group

JEL Classification: F10, F50, F60, F53

1. Introduction

Japan is a reliable partner to the European Union (EU) and the Visegrad Group (V4). The EU Member States and Japan are often described as soft powers, economic powerhouses and developed democracies with social market economies. Czechia, Poland and Slovakia celebrate 100th anniversary of diplomatic relations with Japan in 2020. This paper gives hints on the strategic potential of the Visegrad Group in Japan's EU strategy, and significance of the Economic Partnership Agreement (EPA) for elevating V4-Japan cooperation on higher level. The aim of the paper is to present a brief overview of current European-Japanese and Visegrad Group-Japan economic relations within the frame of the EU-Japan strategic partnership. The goal is to point out implications amid challenges and to draft few perspectives.

The first chapter introduces a chronological development of EU-Japan cooperation, how it transformed into strategic partnership, and resulted with the EPA. The second chapter will argue why the Visegrad Group has bright prospects for cooperation with Japan within the EU, and what value does the cooperation with Czechia, Hungary, Poland and Slovakia under the platform of the Visegrad Group has for Japan. The third chapter will present concluding remarks on geo-economics of EU-Japan convergence, implications and perspectives of the EU-Japan strategic partnership for the Visegrad Group. The article is based on selected available governmental sources and data and a literature review with a comparative approach.

2. The EU-Japan Cooperation, Overview and Beyond 2020

Strengthening of political-economic relations of the EU and Japan since last three decades ago has been a consequence of shared values and complementarity of the strategic partnership. Borucińska (2018) has divided the development of EU-Japan cooperation into four stages. The first phrase started in the Cold War period. It is described by distant interaction with slow convergence culminating with the Agreement of the European Atomic Energy Community and Government of Japan on thermonuclear fusion in 1989. This period reflected a bipolar world order, in which the EU and Japan were aligned to the Western Block under the US leadership.

The second stage from 1991 until 2000 brought the relations closer with yearly EU-Japan summits since the Joint Declaration of 1991, covering the whole range of activities (political, economic, security, cultural, scientific, etc.) and the Joint Declaration on Relations, which addressed economic cooperation and investments. This period reflected a unipolar world order with the US at the centre of global politics, and the boost of transnational private capital via investments, institutionalisation of economic processes, economic globalization.

The third phrase covered the first decade of the new millennium (2001-2010), which coincided with the EU strategy for Asia depicted in the “Europe and Asia: A Strategic Framework for Enhanced Partnership” from 2001, followed by a series of EU-Japan agreements elevating the relations towards a strategic engagement. This period of emerging multi-polar patterns gave rise to China after its inclusion into the World Trade Organisation (WTO), for the EU the period of enlargement process, the emergence of Brazil, Russia, India, China, South Africa (BRICS) as alternative model of development, or the period of global economic crisis in 2008.

The fourth phrase started with the second decade of the 21st century and culminated with the Economic Partnership Agreement (EPA) into force in early 2019. This period reflected dynamic China as global active player with New Silk Road, Japan’s and EU’s economic downturn, migration crisis in Mediterranean region, US-China trade war, Brexit, to name few.

Looking beyond the year 2020, the EU and Japan will likely enter next (fifth) phrase with settled bilateral strategic priorities to deal with rising negative externalities given many global challenges such as the climate change, factionalism and populism in the West, limits of the ‘endless economic growth’, humanitarian crises, bio-security (e.g. coronavirus), rising authoritarianism, shade of illiberal democracies, and undermining rules-based multilateral systems built meticulously in the post-war period (European Commission 2018, p. 47).

The European External Action Service (EEAS) is responsible for EU’s diplomatic relations and foreign policy, including security, maintaining good relations and managing the strategic partnerships with the non-EU countries. It supports the office of the High Representative as the EU’s chief diplomat. The European Council in its New Strategic Agenda 2019-2024 aims to become a stronger entity in the world affairs based on the relative consistency between the EU institutions and the member states’ national foreign policies. According to the EU’s New Foreign Policy Agenda up to 2024, the EU’s external relations’ priorities include protecting multilateralism, championing it for the like-minded actors, but also dealing with a rising China (Puglierin, 2019, p. 10). The priorities are duly consistent with the EU-Japan partnership.

Current EU’s financial position on external relations and action is in compliance with the new multiannual financial framework (MMF) and the EU’s seven-year budget for the 2021-2027 period. Within the Heading 6, the EU has increased resources in the new instruments of which some may be used in the EU-Japan cooperation agenda; the Neighbourhood, Development and International Cooperation Instrument (14,5 billion EUR), the Common Foreign and Security Policy (3 billion EUR), the Cooperation with Overseas Countries and Territories (500 million EUR), and the European Instrument for Nuclear Safety (European Parliament, 2019, p. 6).

2.1. EU-Japan Geo-Economic Convergence amid Challenges

The EU Member States and Japan share common recognition over their status of developed democracies and social market economies. The convergence started slowly since 1991 with Japan-EU summits and boosted with the 2001 Strategic Partnership. Around the time of the global financial crisis of 2008-2009 burst out the EU and Japan to enter a new phrase of cooperation on political security, intellectual and social links, and was associated with regular meetings on finance, economic strategy, structural reform and free trade agreement (FTA), which has eventually brought the Economic Partnership Agreement (EPA).

The timing of the EPA implementation since 2019 follows the culmination of common strategic interests crossing the threshold of the year 2020 with many challenges for the EU and Japan. Both Japan and the EU suffer from large public debt. The gross government debt of Japan was 238.2% in 2018 (Trading Economics, 2020), the public debt in the EU was 80.4 % to Gross Domestic Product (GDP) in the same year (Eurostat, 2020). The last quarter of the 2019 was marked with a decline of Japanese GDP growth, and signs of economic stagnation. Here the gross government debt of some EU substantial Western economies has been on rise, e.g. Belgium 100%, France 98.4%, Italy 134.8% Spain 97.6% GDP in 2018. For small Visegrad economies, the debt has been handled more responsibly with Czechia 32.6 %, Hungary 70.2%, Poland 48%, Slovakia 49.5% GDP, but its increasing (Eurostat, 2020).

As the global economy has been under pressures from protectionism, political populism or unilateralism, it should have mechanisms to decrease trespassing of the international law, (axiological) system of rules for economic institutions and business networks. Ongoing US-China trade war, conflicts and migration crises, or asymmetric risks to the global economy, such as the coronavirus COVID-9, or the climate change bring worries about the future of open liberal market space, sustainability of growth and economic globalization. With this regard, the EPA is a model of joint responsive economic policy. As the President of the European Commission Jean-Claude Juncker noted the EPA is “...*about values, principles and fairness. It makes sure that our principles in areas such as labour, safety, climate and consumer protection are the global gold-standard*” (European Commission 2019a).

2.2. The EU-Japan Economic Partnership Agreement Implemented

Since the Economic Partnership Agreement (EPA) has entered into force in February 2019, the common EU-Japan marketplace represented a market of over 567 million consumers without the United Kingdom (UK), and counts for about a third of world's Gross Domestic Product (GDP). It is expected to save over 1 billion euro in duties yearly and boost trade.

The key elements of the EU-Japan EPA are the elimination of customs duties, agricultural and food products, geographical indications, industrial products, fisheries, forestry, non-tariff barriers (e.g. Japanese market for EU motor vehicles), trade in services (e.g. postal, financial, maritime), state owned enterprises (treatment of EU companies in Japan), public procurement (equal footing of EU companies with Japanese firms in '54 core cities' of Japan), investment, intellectual property rights, data protection, sustainable development (EU keeps ban on imports of whale products), corporate governance, competition, state-to-state dispute settlement mechanism (European Commission, 2019b).

The EPA is trade-liberal, for the EU it represents 99% of tariff lines and 100% of imports, while for Japan 97% of tariff lines and 99% of imports. On the top of that the EPA opens a variety of benefits to small and medium sized enterprises (SMEs) in accessing markets and dissolves some tariff and non-tariff barriers. EU will be able to export mainly agricultural

products and manufactured goods like Japan. (European Commission 2018a, p. 46) The largest beneficiaries of the EPA are expected to be the most developed EU economies such as Germany, France, Netherlands. The floor is open to the Visegrad countries as a region of the EU with competitive advantages for Japanese corporations fairly considering removing a number of corporations from the UK after Brexit (Bertalaníč 2007). These opportunities elevate the V4 region's value for Japan strategically within the EU and brings positive externalities to all stakeholders.

The timing of the EPA towards the 2020s therefore conveniently responds to ever changing international affairs and strengthens the convergent interactions towards closer economic integration of the two global economic powerhouses. As *Jean-Claude Juncker summarized*, “..(t)his only happens when you work with the most natural of partners, separated by thousands of kilometres but united in friendship and values”(European Commission 2019a). What does it mean for the V4 countries and what is the state-of-affairs of V4-Japan relations?

3. The Visegrad Group + Japan, A Platform with Future

With the end of Cold War, Czechoslovakia, Hungary and Poland, formerly members of the Warsaw Pact strove to rise their political weight to join the EU and North Atlantic Treaty Organisation (NATO). Following these efforts, the investment climate had improved which caught attention of foreign investors (Bertalaníč 2018). This trend had strengthened with the achievement of EU membership of all V4 countries in 2004, which raised interest in Japan.

The EU accession process is therefore seen as the starting point of a key phrase of development of cooperation that emerged with Japan-V4 relations. Initial contacts of V4 with Japan can be traced to the Prime Minister (PM) Junichiro Koizumi's visit of Central Europe in 2003, which was followed up with rising awareness of the region in Tokyo. Under first mandate of the PM Shinzo Abe, Japan has boosted the relations with V4 further since 2007. The cooperation had temporarily slowed down during the general election in 2009 after a ruling party change.

Japan's return to the Visegrad region was underlined with the “Partnership Based on Common Values for the 21st Century” and periodic dialogues between the V4 Presidency and Ambassadors of Japan. Japan took policies on regional multilateral formats such as the Nordic-Baltic and Japan (NB8+Japan) and the Visegrad Group + Japan, deepening Japan-EU relations by strengthening cooperation with EU-based institutions (Bertalaníč 2018).

3.1. The Arc of Freedom and Prosperity and the Visegrad Group

In 2006 the idea of the Arc of Freedom and Prosperity had evolved into the Japanese diplomatic strategy implemented in regions and countries of the Eurasian outer rim. Japan would act in partnership with other nations based on common fundamental values “*to jointly bring about a society*” of freedom and prosperity. (Ministry of Foreign Affairs of Japan 2007a, p.3). Involved regions and countries are the Association of Southeast Asian Nations (ASEAN), India, Central Asia + Japan (Kazakhstan, Uzbekistan, Kirgizstan, Tajikistan, Turkmenistan), Caucasus - Japan + GUAM (Georgia, Ukraine, Azerbaijan, Moldova), the Balkans and the Visegrad Four + Japan to be supported in democratization and market economic processes.

The PM Taro Aso claimed that the Arc of Freedom and prosperity and the “value-oriented diplomacy” emphasise “universal values” as democracy, human rights, freedom, rule of law, market economy. Japan as “escort runner” would support these countries in achieving economic and democratic transitions. “*This region includes countries whose systems have been undergoing great changes now that the confrontation between the East and the West has*

ended” (Ministry of Foreign Affairs of Japan, 2007b).

Beginning of the Japan’s value-oriented diplomacy can be traced back to 1990s with the Partnership for Democratic Development that provided support young democracies as they built mechanisms for governance, formulation of legal systems and judicial systems. A New Pillar for Japanese Diplomacy: Creating An Arc of Freedom and Prosperity, can be seen as evolution of these policies with focus on universal values such as democracy, rule of law, freedom, human rights and market economy. This arc presents for Japan a region of stability with basis in universal values, and this arc will lead to “expansions from those points around the rim” (Ministry of Foreign Affairs of Japan 2007b). Japan would use of official development assistance to provide support for basic human needs such as health care, education, support to democracy and contributions to human security.

The V4 countries, the most developed region of the arc, would become particularly important as a model example of successful political and economic transitions. Bertalaníč (2018) has explained the importance of the context of EU identity in post-Brexit Japan-V4 cooperation, where EU membership of the V4 countries was a key determinant in Japanese diplomatic offensive, yet the V4 Central European identity remains incohesive which may be interpreted as one reason of being a part of the Arc of Freedom and Prosperity in Japan’s foreign policy.

3.2. Visegrad Countries and Japan, Economic Relations

Looking at the economic relations of the EU and Japan, a decade ago the European trade balance with Japan had been negative, but it has been significantly narrowed from – 34,1 billion EUR in 2008 to – 5,7 billion EUR in 2018. While the European export reached the value of 42,4 billion EUR and import 76,5 billion EUR in 2008, a decade ago the European export to Japan was worth of 65,8 billion EUR and the EU imported goods worth of 70,5 billion EUR (Eurostat 2018). The EPA is expected to boost EU-Japan trade by 36 billion EUR. In 2018 Japanese foreign direct investments (FDI) in total were for Czechia 24,7 billion Japanese yen (JPY), Hungary 20 billion JPY, Poland 1,9 billion JPY, Slovakia 3 billion yen (Ministry of Foreign Affairs, 2018).

Table 1: Visegrad Group – Japan Economic Relations, Overview of Selected Indicators

	CZ	HU	PL	SK
Number of Japanese Companies in the V4	949	483	1 306	201
% of SMEs share exporting to Japan	37	-	74	-
Order of Japan as a trade partner outside EU	7	7	11	13
Exports to Japan (million EUR)	687	489	501	108
Imports from Japan (million EUR)	1 500	1 300	1 300	212

Source: European Commission (2018b). Available at: https://ec.europa.eu/info/index_en.

Legend: CZ – Czechia, HU – Hungary, PL – Poland, SK – Slovakia.

The Table 1 summarizes the available data on selected indicators of the V4-Japan economic relations. The data shows disparities in the number of Japanese companies operating businesses within the V4 region in favour of Czechia and Poland. Slovakia lags behind other Visegrad countries in given indicators but it strives to attract Japanese investors on competitive advantages. Japan maintains a positive trade balance with all Visegrad economies by over twice of the export value to Japan. Yet the V4 and Japan enjoy vital and promising outlook.

The Japanese production includes car industry, electronics, engineering, brewing. Czech exports of local products to Japan include dog food, malt, floor boards, children’s playground

equipment, glassware (Prague), heat-resistant bricks, agricultural machinery, crepe paper, chemicals (Brno). Hungarian export of local products to Japan include self-checkout terminals, pork, manicure/pedicure products (Páty), honey, gears, car parts (Budapest), chest freezers, vacuum cleaners, corn (Jaázberény). Poland's export of local products to Japan include charcoal, frozen berries, plywood (Gdynia), suitcases, vodka, frozen berries (Warsaw), fish, trousers, plywood (Wrocław). Slovakian export of local products to Japan include fish glue, gelatine (Liptovský Mikuláš), glassware, shoes, lamps (Bratislava) (European Commission, 2018a, 2018b, 2018c, 2018d).

4. Implications and Perspectives

The geo-economics of EU-Japan strategic convergence brings the two significant economic powerhouses ever closer. How the concept of geo-economics is related to EU-Japan strategic partnership? It is highlighted with the EPA that reacts on changing features of global economy such as US-China trade war, imposition of barriers, tariffs or other forms of protectionism.

Pascal Lorot defined geo-economics as an analysis of the strategies within the economic world order, and as a contract among states with the objectives of i) "protecting the national economy or certain parties", ii) "acquiring key technologies", iii) "acquiring world markets for product manufacturing or iv) "a range of key sectors to which the state attributes an element of power to an international projection that contributes to economic and social potential" (Lorot 1999, p. 15). Here Kvinidadze (2017) reminds us that geo-economic rivalry is not aimed at weakening the competing economy of an opponent, but to increase its own competitiveness.

Geo-economics is a vital component of power politics for developed countries such as the EU and Japan. It follows a sense of determination to define the global and regional economic order leading to the reconfiguration own regional geo-economic order. Japan's geo-economic strategy has been in supporting the institutions and rules via rules-based institutions such as the WTO (Katada 2018), so does for the EU, and the EPA follows these objectives.

These aims fit into the frame of EU-Japan strategic partnership in which Tokyo co-established new multilateral regional partnerships with various parts of the EU, including the Visegrad Group. It is expected Japanese investors explore new markets in central Europe and recognise the value for their capital saving production locations in the EU from automotive industry to trade in agricultural products from travel and tourism to cultural products.

In context of perspectives for the V4, the EU-Japan strategic partnership is expected to bring many new opportunities to Czech, Hungarian, Polish and Slovak companies and producers. Hutt (2019) argues for Visegrad countries being open to Japanese investments instead of Chinese. He points out that confidence in China is waning in the region, but Chinese investments are small comparing to expectations, following the promise of the V4 possible role in the One Belt One Road project (Laš, Poledníková 2018). The trade with Japan comes without the political baggage of trade with China (Bertalaní, 2018). This may bridge South Korean and Taiwanese partners of the V4 with the Japanese stakeholders in joint projects.

Bertalaní (2018) argued for opportunities that await in the coming years of the post-Brexit era in Japan-V4 cooperation. His proposition is based on EU dimension of the Visegrad countries' identity that represents one of key determinants of Japan-V4 cooperation. According to his opinion, the V4 members nurture high expectations from the implementation of EPA. With withdrawal of the UK from the common market the Visegrad region anticipates a significant redirecting of Japanese FDI. (Bertalaní 2018, p. 10). The question is how the leaders of V4 will handle formation of their roles in the EU, and how will the V4 economies benefit from the EPA and Japan's interests.

Last but not least, the economic development is interwoven with security. One example is the coronavirus COVID-19 epidemic threat which hit the industries and services worldwide. These externalities may bring unexpected deviations on financial markets, demand decreases from production dropouts, quarantine measures hit badly the aviation business, tourism and the clustered services, as well as some whole cities and regions in Europe and Japan. Japan and EU will need to make sure their strategic partnership will prove vital in the middle of these challenges. The Visegrad export-oriented economies will have to monitor all these challenges and form strategies to mitigate the impact of a possible decline of demand for export products or an unexpected arrival of a global financial crisis. Therefore, the future research may focus on the Japan-EU-Visegrad economic integration prospects and global externalities.

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The Current Situation and Prospects of the Electricity Market in Poland and the EU Energy Policy

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Abstract

Poland's accession to the EU on 1 May 2004 provided the strongest stimulus for change, as it required the country to update its national energy policy. Although the demand for energy in Poland is high, the energy sector remains insufficiently developed in terms of production and transport infrastructure. The situation is further complicated by the country's considerable dependence on natural gas imports and nearly total dependence on oil imports. In addition, given the numerous restrictions imposed by the EU on Member States in the area of environmental protection and, above all, climate, Polish energy sector shall require substantial adjustments in the coming years. The purpose of this paper is to analyse the current situation and development perspectives of the energy market in Poland, as the country adapts to the requirements set out in the EU's energy policy.

Keywords: electricity market, energy policy, EU, Poland

JEL Classification: A11, Q20, Q40, Q48

1. Introduction

The energy policy of the European Union (EU) has had an immense impact on the development of the electricity market in Poland. It includes numerous measures, ranging from the liberalization of the electricity market, to the requirements set out in the Climate and Energy Package (Rutkowska, Sulich and Pakulska, 2018, p. 1256) These requirements affect the electricity market in Poland, as evidenced *inter alia* by an increased share of renewable energy in the country's energy balance, improved energy efficiency and reduced greenhouse gas emissions. The aim of this paper is to analyse the current situation and development prospects of the electricity market in Poland, as it adapts to the requirements of the EU's energy policy. For realization of this purpose we use mainly descriptive and statistical method. The article is a synthetic analysis showing how the structure of the country's energy balance, energy efficiency and investments in renewable energy sources affect the price that customers pay for electricity. The main focus shall be placed on examining the structure of electric power generation in Poland, the increasing share of renewable energy sources in the country's energy balance, and improving energy efficiency, as these elements are instrumental in ensuring the security of energy supply, but also affect the price paid for electricity by final customers. Measures that Poland has undertaken to introduce by 2030 in response to its obligations resulting from the EU's Climate and Energy Package are also analysed.

2. Energy Policies of the EU

Regional economic integration in Europe was accompanied by efforts aimed at creating a common energy policy. It's the most important aim was to ensure safe energy supply to each country (Zajączkowska, 2016, p. 1096). Countries are endowed differently in terms of energy resources, and have different import needs and consumption patterns (Matlár, 1997, p. 12). Since Poland's accession to the EU in May 2004, the country has had to adapt its energy market to the obligations imposed on Member States.

In accordance with Article 194 of the Treaty on the Functioning of the European Union (TFEU), the European Union's energy policy aims to ensure the functioning of the internal energy market and the security of energy supply in the EU, to promote energy efficiency and energy saving, as well as the development of new and renewable forms of energy and the interconnection of energy networks.

The liberalization of the electricity and natural gas markets, which took place when Member States gradually began to open their markets to competition, ought to be considered the first of numerous measures introduced by the EU in the field of energy. Liberalization was put into effect pursuant to Directive 96/92/EC concerning common rules for the internal market in electricity and Directive 98/30/EC concerning common rules for the internal market in natural gas (URE, 2003, p. 44). Directives were then transposed and incorporated into the national law of each Member State. Some provisions did not enter into force until 2007, but since then, customers in Member States have been free to choose among a wider group of electricity and gas suppliers.

In March 2006, the Commission shaped the EU's energy policy agenda by publishing its "Green paper on a European strategy for sustainable, competitive and secure energy". This document opened up the inter-institutional debate on a formulation of a comprehensive EU energy policy (Biesenbender, 2015, p. 33).

In December 2008, the European Parliament adopted the Climate Change and Energy Package (CEEP), setting specific goals to be met by EU Member States by 2020. These included: reducing greenhouse gas emissions in the EU by 20% compared to 1990 levels; increasing the share of renewable energy in final energy consumption to 20% compared to 1990 levels (15% in the case of Poland); improving energy efficiency by 20% compared to 1990 levels (Gheorge, 2011, p. 366).

At the European Council meeting held in Brussels on 23 October 2014, the following binding climate and energy policy goals - to be attained by 2030 - were set: reduction of greenhouse gas emissions in the EU by at least 40% compared to 1990 levels; augmenting the share of renewable energy in final energy consumption to 27% compared to 1990 levels; increasing energy efficiency by 27% (European Council, 2014). In addition, approximately half of the effort to reduce pollution shall be made within the Emissions Trading System (EU ETS), which is always emphasised as the key for reaching the climate targets (Olei, Hermann, Herpich, Holtemoller, Lunenburger and Schult, 2020, p. 2). By 2030, EU ETS greenhouse gas emissions are to be reduced by 43% compared to 2005 (European Commission [online], 2019). In 2018, the European Commission, the European Parliament and Member States revised decisions defining the objectives of the EU's Climate and Energy Policy until 2030. The target of renewable energy share in gross final energy consumption was increased to 32% (Directive EU 2018/2001) and the energy efficiency goal was set at 32.5% (Directive EU 2018/2002).

On 11 December 2018, the Regulation on the Governance of the Energy Union and Climate Action was adopted (Regulation EU 2018/1999). It obliges Member States to draw up national energy and climate plans for 2021-2030, which are to be followed by progress reports. The

Regulation provides for national and EU registers and lists of greenhouse gas emissions for the period after 2020 as a way of assessing progress in implementing the Paris Agreement on climate change. The Regulation obliged each EU Member State to draw up an integrated national energy and climate plan for 2021-2030 by 1 January 2019.

3. Electricity Market in Poland

In economics, the market is defined as a mechanism coordinating the behaviour of buyers and sellers participating in the process of exchanging goods and services (Begg, Fischer and Dornbusch, 2007, p.77). This is, however, a very general definition, and it encompasses a variety of markets. In the case of the electricity market, the supply of electricity to all final customers, both households and businesses, is guaranteed. Poland's electricity market was liberalized on 1 July 2007. As a result, all customers can purchase energy from an energy supplier of their choice, regardless of the location. When customers purchase energy on the electricity market, they receive both energy as such and the service of electric power transmission from the producer to the recipient (PTPiREE [online], 2019).

Electricity in Poland is generated mainly from coal. In 2018, 170 TWh of electricity was produced in Poland, primarily from coal (47.8%) and lignite (29%). The share of these fuels in electricity generation decreased in 2010-2018 by 9.8 percentage points, and the production of energy from renewable sources increased in this period by 5.8 percentage points. In 2018, the share of renewable energy production came to 12.7%, with wind, biomass and biogas as the main energy sources. Although the share of solar energy was the smallest, it ought to be emphasised that this sector has been developing most rapidly (Agora Energiewende and Sandbag [online], 2019, p. 7).

Table 1: Electricity Generation by Energy Carrier in Poland (GWh)

Specification	2010	2012	2014	2016	2018
	GWh				
Hard coal	87863	80528	76162	79400	81257
Lignite	48651	54054	53365	50920	49331
Gas fuels	4890	6259	5329	7831	12709
Pumped storage	568	428	551	482	417
RES	10889	16879	19841	22808	21580
Biomass and biogas	6305	10094	9976	7957	6511
Water	2920	2037	2182	2139	1970
Wind	1664	4747	7676	12588	12799
Photovoltaic	0	1	7	124	300
Other fuels	4797	3991	3810	5193	4745
Total	157658	162139	159058	166634	170039

Source: Statistics Poland (2019), p. 27

The decreasing share of electricity generated from coal can be accounted for by the decline in the extraction of the latter. In 2008, 83.4 million tonnes of coal and 49.4 million tonnes of lignite were extracted in Poland, while coal imports amounted to 9.4 million tonnes. By 2018,

coal extraction dropped to 63.4 million tonnes, lignite extraction to 58.5 million tonnes, while coal imports increased to 19.7 million tonnes (Eurocoal [online], 2020, p. 42). These data show that Poland's shrinking coal resources are supplemented with imports; this contributes to the country's growing dependence on energy imports from other countries.

The share of renewable energy in gross final energy consumption in Poland has grown slowly from 6.9% in 2004 to 11.3% in 2018. In accordance with the EU's Climate and Energy Package, Poland has committed to reaching the target of 15% share of renewable energy in final energy consumption. However, according to the National Energy and Climate Plan for 2021-2030, this goal is unlikely to be reached before 2022. (Ministry of Energy [online], 2019, p. 18).

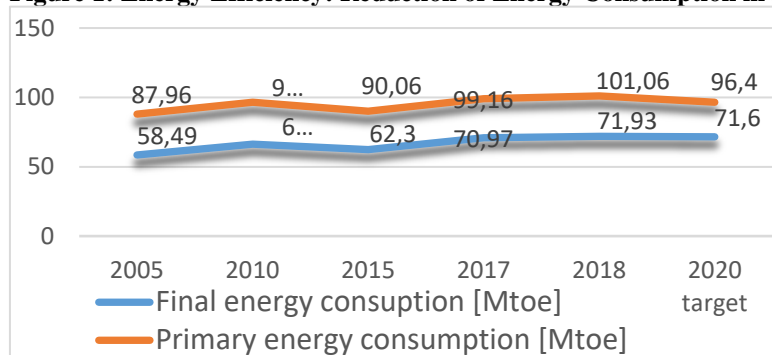
The share of energy from renewable sources is divided among electric power, heating and cooling, and transport. In 2018, the largest share of energy from renewable sources was recorded in heating and cooling (14.8%), followed by electric power (13.0%), and transport 5.6% (see Table 2).

Table 2: Share of Energy from Renewable Sources in Gross Final Energy Consumption in Poland, in Gross Electricity Consumption, in Heating and Cooling, and in Transport (%)

Share of energy from renewable sources	Years							
	2004	2006	2008	2010	2012	2014	2016	2018
in gross final consumption of energy	6,9	6,9	7,7	9,3	10,9	11,5	11,3	11,3
in gross electricity consumption	2,2	3,0	4,4	6,6	10,7	12,4	13,4	13,0
in heating and cooling	10,2	10,2	10,8	11,7	13,4	14,0	14,7	14,8
in transport	1,4	1,6	3,5	6,6	6,5	6,2	3,9	5,6

Source: author's own elaboration based on Eurostat [online] (2019)

In terms of improving energy efficiency, Poland has assumed that by 2020, the maximum consumption of primary energy would not exceed 96.4 Mtoe, and final energy consumption - 71.6 Mtoe. Figure 1 shows the level of reduction of energy consumption in Poland. In 2018, primary energy consumption in Poland added up to 101.06 Mtoe, while final energy consumption amounted to 71.93 Mtoe, which means that maximum levels of primary and final energy consumption set for 2020 were exceeded.

Figure 1: Energy Efficiency: Reduction of Energy Consumption in Poland

Source: author's own elaboration based on Eurostat [online] (2020)

An analysis of electricity prices forms part of the examination of the Polish electricity market. In the first half of 2019, Polish customers paid 13.43 eurocents per kWh of electric power. Customers in only five other EU Member States, namely Bulgaria, Hungary, Lithuania, Malta and Croatia, paid less for electricity during this period (Eurostat [online], 2020a). However, these prices are likely to increase, mainly due to the rising prices of CO₂ emission allowances, which in 2018 alone increased by 210% (between the start and the end of the year) (Towarzystwo Obrotu Energią, 2019, p. 10). This increase in prices can be accounted for by the EU's growing ambitions in the area of environmental protection, the tightening of the climate policy and the transition towards low-carbon economy. However, in a longer run, high prices of emission allowances may become a powerful incentive for switching to fuels generating less emissions, i.e. natural gas, and for investing in energy generation from renewable sources.

In order to adapt to current EU requirements in the field of energy production, on 21 November 2018, the Ministry of Energy presented a new draft of the national energy strategy entitled "Polish Energy Policy until 2040 (PEP2040)" (*Polityka energetyczna Polski do 2040 roku, PEP2040*). It sets, among others, the following targets (Ministerstwo Energii, 2019):

- 60% share of coal in electricity generation by 2030. The total share of coal in electricity generation in 2030 is expected to be around 60%. All investments undertaken after 2025 are to be based on technologies that meet the emission standard of 450 kg of CO₂ per MWh of generated energy.
- 21% share of renewable energy sources in gross final energy consumption by 2030; according to the forecasts of the Polish government, the fastest-growing RES in the coming years are expected to be photovoltaics (mainly from 2022 onwards) and offshore wind farms, the first of which is to become operational after 2025.
- Implementation of nuclear energy by 2033. The first nuclear unit with a capacity of 1-1.5 GW is to become operational by 2033, further four nuclear units between 2033 and 2039, followed by two more in 2041 and 2043.
- 30% reduction in CO₂ emissions by 2030 (compared to 1990). It is to be achieved through the closing down of units that do not meet emission standards and modernizing electricity generation units. Attaining this target will also be facilitated through the implementation of nuclear energy, the use of renewable energy sources and improved energy efficiency.
- 23% increase of energy efficiency by 2030 (compared to 2007 forecasts for primary energy). This goal is to be achieved by improving the efficiency of energy transmission and storage, increased share of energy from renewable sources, thermo-

modernisation of buildings, the use of energy-saving lighting, as well as the introduction of electromobility.

To sum up, although coal will remain an important source of energy in Poland, the share of low-carbon technologies is expected to increase, along with a continual development of photovoltaics, the construction of offshore wind farms, electromobility, increased energy efficiency, as well as the construction of nuclear power plants in the years to come.

4. Conclusion

The paper outlines the current situation and the process of adapting Polish electricity market to the requirements set out in the EU's energy policy. As required by the EU, Polish energy market has been liberalized, which means that final energy customers can freely choose their energy supplier. However, almost 80% of electricity in Poland is still generated from coal, even though this natural resource is shrinking. This presents a significant threat to the country's energy security, as depleting energy resources are not replaced by other energy sources. Instead, energy imports increase. Less energy is generated from fossil fuels, which can be accounted for by the growing popularity of renewable energy sources. However, as pointed out above, the share of energy from renewable energy in final energy consumption in Poland has been increasing quite slowly. In order to ensure significant savings, the country's energy efficiency must be improved. All of the above elements, i.e. the structure of the country's energy balance, energy efficiency and investments in renewable energy sources affect the price that customers pay for electricity. In the future, electricity prices in Poland will undoubtedly keep rising, due not only to the growing cost of emission allowances, but primarily as a result of the energy transformation process and the transition to low-carbon and competitive economy.

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Influence of Brexit on Education towards Europeanism

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Abstract

The present research study explores the extent to which the withdrawal of the The United Kingdom of Great Britain and Northern Ireland (UK) from the European Union (EU) may negatively affect the efforts to lead in particular young people to have a positive attitude towards this integration group, enhance a feeling of belonging to it or a certain sense of common European citizenship. The main aim of the paper was to identify those selected circumstances of Brexit and its campaigns that could evoke strong Eurosceptic sentiments and, on the contrary, look for ways to eliminate these negative tendencies. The authors discuss how a populist, emotionally focused and often misleading campaign has significantly contributed to the vote of Brexit in a referendum, which is a precedent that may under certain circumstances be repeated in other member countries. The paper also discusses the media dimension of the topic. Especially the question of spreading misinformation, hoaxes, conspiracy or propaganda in alternative media that can strengthen Euroscepticism in many EU countries, including the Slovak Republic.

Keywords: Brexit, education, European Union, Euroscepticism, media

JEL Classification: F50, F68, Z11

1. Introduction

Brexit, the referendum on the withdrawal of the United Kingdom of Great Britain and Northern Ireland (UK) from the European Union (EU), is still a very actual topic. Also, the issue of the impact of this event is still a crucial topic for European or international policy. Brexit is, therefore, an opportunity to study a unique political phenomenon that is under-researched and still in the process of development in the time of writing this work. Especially in the Slovak literature, there is a lack of scientific papers or publications dealing with this phenomenon and its impacts. We know that UK citizens choose a definite break with the European Union on 23 June 2016. With this decision, they moved their country to a position where no other country had previously been.

On 23 June 2016 UK citizens voted to leave the European Union after 43 years of membership. It was the start of a long marathon of political negotiations between the two parties, which are still not in the finish and again it's not clear under what conditions Britain will exit the EU. The long and complicated road also led to this referendum. "A large part of the country, especially England, has always been quite uninterested and little inclined to European political integration." (Cremedes, Novak, 2017, p.5). The more or less openly declared goal of most British governments from the Labor Government of Harold Wilson to the Government of David Cameron was to keep further political, economic integration or merging of sovereignty to a minimum. The perception of European integration was usually negative and European

integration was presented by the majority of the media as a process of loss rather than sharing sovereignty (Cremedes, Novak, 2017).

During the referendum campaign, many advocates of leaving the EU emphasised their vision of the independent UK that is exploiting the potential of its citizens through direct democratic scrutiny as well as national and local government and giving maximum freedom and accountability to its people. There is, therefore, strong opposition to the concepts and ideas of shared sovereignty, multilevel governance at European level, transnational (supranational) democracy or an ever closer union, in which decisions are taken as close as possible to the citizen under the principle of subsidiarity (Cremedes, Novak 2017).

The United Kingdom Independence Party (UKIP), which received nearly four million votes (13%) in the May 2015 elections, has been openly campaigning for the UK's withdrawal from the EU for many years. Soon they were joined by several members of the Conservative Party's Eurosceptic wing and even six members of the Cabinet. The Labor Party, the Liberal Democratic Party or the Scottish National Party were officially for staying in the EU (Cremedes, Novak 2017).

As the A. Hrubinko (2019, p. 126) wrote, the general public attitude towards European integration was marked by instability, which was caused by insufficient awareness of its citizens, Eurosceptic attitude of leading parties, conservatism of public sentiment and specificity of British identity, anti-European propaganda of the leading press. Contradictory character of European policy of the British governments and the lack of popularity of the unifying tendencies in the region among the local public caused the lack of unity in the question of the future participation of the state in the European Community, the uncertain positions of Great Britain on the eve of key events in the history of European integration related to the formation of the EU laid the basis for further problems in the UK's relations with the EU.

As wrote Kamil Kotlinki (2018, p. 157), the effects of the United Kingdom leaving the EU will be more unfavorable for the UK than for the EU. The amount of losses depends on the type of Brexit. A soft Brexit means a relatively slow negotiation designed to retain as close as possible a relationship with the rest of the EU. Access to the EU's single market will reduce losses due to having as few tariffs as possible. A hard Brexit would mean getting out of the EU quickly, having no institutional or political relationship with the union, and regaining full control of UK borders. Therefore, a negotiated free trade deal with the EU would seem to reduce losses for everyone.

Not all authors are firmly confident whether Brexit will be positive or negative for Great Britain. „But what is better for Great Britain, stay in or go out? There is no universal answer to this question. It depends which way we look at it or what we believe is important“ (Melus, 2016, p. 462).

According to Jean Arthuis (2018, p. 37) , Brexit is a chance for Europe. It casts a cruel light on the institutional fragility of the European Union, whose functioning is hardly defensible to public opinion.

Leaving the European Union is an unprecedented process, and the United Kingdom will be the first country to undergo it. Will it become a model for the other EU Member States that decide to follow these steps, or, on the contrary, will it become a deterrent example that such an action can be lossier than gainful?

2. Problem Formulation and Methodology

The addressed research issue is the degree of harmfulness or usefulness of leaving the EU for the United Kingdom but also the European Union.

The main research objective of the theoretical study was to identify those selected circumstances of Brexit and its campaigns that could provoke strong Eurosceptic sentiments, and on the contrary to look for ways to eliminate these negative tendencies.

The secondary research objective was to discuss how a populist, emotionally focused and often misleading campaign contributed significantly to the vote on Brexit in a referendum, a precedent that may in certain circumstances repeat in the other Member States. In the framework of the methodology of the work, we have identified four research questions (RQ):

- RQ1: What circumstances led to a referendum on withdrawal from the European Union?
- RQ2: To what extent has the political campaign and political communication contributed to the vote on Britain's withdrawal from the European Union in the framework of the referendum?
- RQ3: To what extent has mass media reporting and social networking information contributed to the Brexit referendum result?
- RQ4: What are the possibilities to increase the credibility of the European Union and the European institutions among citizens of the Member states after Brexit?

As a research file will serve us, mainly foreign literature and internet articles.

The methodology we will use in this work consists of an analysis of the current state of Brexit negotiations, review and comparison of possible models of after Brexit economic cooperation between the EU and Great Britain and forecasts of significant impacts of Brexit for Great Britain, the European Union and the Slovak Republic.

2.1 Model and Data

What led to the referendum on withdrawal from the European Union?

To sufficiently understand what has led the UK citizens to Euroscepticism and doubts about the European Union, let us briefly summarise how this country has approached European integration since its beginning. In 1957, France, West Germany, Belgium, Italy, Luxembourg and the Netherlands signed the Paris Treaty, which established the European Economic Community (EEC), the forerunner of today's European Union. It was the last of several previous attempts to promote economic cooperation between European nations after the Second World War (Pruitt, 2017). It happened with the belief that nations that trade with each other are less likely to want to wage war with each other.

When the United Kingdom first applied for EEC membership in 1963, French President Charles de Gaulle vetoed that application because he did not want English to replace French as the dominant language of the Community. He was also worried that the UK would not fit in with the concept of a European single market. "The current common market is incompatible with an economy like the United Kingdom today." (Gaulle, 1967). The UK finally came to this club in 1973, under the leadership of conservative Prime Minister Edward Heath. However, only two years later, Britain found itself on the verge of abandoning the Community. So, in 1975, the country held a referendum on the question: "Do you think the United Kingdom

should remain in the European Economic Community (common market)?" (Pruitt, 2017) At that time, 67% of people voted to remain, which included most of the 68 administrative districts, regions and Northern Ireland, while only the Shetland and Western Islands voted for leave. The Labor Party that initiated the referendum was divided into two parts due to this subject, with the pro-European wing separated from the rest of the party and formed the Social Democratic Party (SDP) (Pruitt, 2017).

The tensions between the EEC and the United Kingdom culminated in 1984 when Conservative Prime Minister Margaret Thatcher was pushing for a reduction in the UK's contribution to the EEC budget. Although at that time, the United Kingdom was the third poorest country in the Community, it paid much more to the budget than other nations. The reason was the relative shortage of agricultural companies. Agricultural subsidies accounted for approximately 70% of total EEC expenditure. This reduction in UK contributions won by Prime Minister Thatcher remains valid today, limiting Britain's contribution to the EU common budget from more than 20 % of the total from the 1980s to around 12 % (Pruitt, 2017).

The Maastricht Treaty, which entered into force in 1993, created the European Union (EU) based in Brussels. The EEC became its main component and was renamed the European Community (EC). The EU has been designed to integrate European nations politically and economically, including a single foreign policy, common citizens' rights and a single currency (Pruitt, 2017).

Labor Prime Minister Tony Blair, who took office in 1997, was a strong supporter of European integration and worked to re-establish relations with the rest of Europe. However, this was undermined by the dangerous 'mad cow' disease (bovine sponge encephalopathy) of the late 1990s. Brussels' response was to introduce a ban on British beef imports into the rest of the EU (Pruitt, 2017).

After the plans for an official EU constitution collapsed in 2007, member countries concluded negotiations on the controversial Lisbon Treaty, which gave Brussels even more extensive powers. The new Labor Prime Minister Gordon Brown became famous for the absence of an internationally aired ceremony in which the leaders of 26 other Member States signed the treaty. He later signed the document but was criticised for failing to defend the agreement he helped negotiate (Pruitt, 2017).

To protect the British financial sector, David Cameron became the first Prime Minister of the UK who vetoed the EU Treaty in 2011. In early 2013, he delivered a highly anticipated speech, outlining the challenges facing Europe and promising to hold a referendum on EU membership if his Conservative Party regained a parliamentary majority in the next parliamentary elections. (Cameron in BBC, 2013). At the same time, support of UK voters for UKIP and its strong opposition to the EU increased (Pruitt, 2017).

Against the backdrop of the economic turmoil in the euro area (the territory of the 19 EU countries using the euro) and the ongoing migration crisis (in the UK), support for UKIP and other protagonists of a possible British exit from the EU has increased again. Following his re-election in May 2015, David Cameron embarked on discussing UK-EU relations, including changes in migrant welfare benefits, financial guarantees and more natural ways for Britain to block EU regulations. In February 2016, he announced the results of these negotiations and designated 23 June 2016 as the date of the promised referendum on withdrawal or staying in the European Union (Pruitt, 2017).

From the history of Great Britain's activity in European integration structures, we learn that this country has been one of its greatest critics from the beginning. Britain has often not quite identified with the ideas and goals or requirements of this integration initiative. We also learned that a similar referendum had already taken place in 1975 when Britain was deciding to stay or withdraw from the European Economic Community. The island country has not always shared ideas about the functioning of these integration structures with the other Member States of continental Europe. That drove Britain to another referendum in 2016, which decided the future of the country with or without the European Union. Although most of the British political scene was in favour of keeping their country in the EU, the citizens decided the opposite way. Let's look at the reasons why this happened.

The British Independent Social Research Institute NatCen has been monitoring the attitudes of the British people towards the European Union since 1993. "The primary anti-European current was stable during the 1990s and early 21st century, but rose sharply shortly after that, doubling from 15% to 30% between 2006 and 2012." (Swales, 2016).

In 2015, there was clear evidence that the UK was in a Eurosceptic mood with two-thirds of those questioned, contrary to the UK's existing relationship with the EU. 20% said they were in favour of leaving the EU and 43% wanted to limit the EU's powers at least (Swales, 2016). Euroscepticism was not interpreting as a new phenomenon, but rather as an escalation of attitudes present since the mid-1990s. However, the proportion of people who thought that the UK should leave the EU was only 26% in 2015. So there was a strong anti-European mood, but most people still clearly felt that staying in the EU was a better solution (Swales, 2016). So, what made people strengthened their negative attitudes towards the EU? Factors that have made the British more negative towards the EU and ultimately sealed their way out of this structure can be categorised into several groups. These groups are international relations between the UK and the European Union, political campaigns and political communication, mass media news and social networks.

Political campaigns and political communication

Before the referendum, two political camps were formed in the UK. The Eurosceptic camp, which included mainly the Conservative Party's Eurosceptic wing and UKIP, promoted their campaign to leave the EU. The pro-European camp made up of other members of the Conservative Party, Laborists, but also the Liberal Democrats and the Scottish National Party was pushing for their campaign to stay in the EU. Both parties' arguments were focusing on the clear rhetorical purpose: to provide good reasons for or against leaving the EU.

The goal of the exit campaign was to promote reasons for changing the current status quo. The pro-European camp, in turn, had to provide sufficiently compelling reasons to doubt such a change. Again, the arguments of both sides were not particularly new, and they were repeated over the years and well known to the public (Martin, 2016). The challenge for the exit campaign was to promote a substantial change in the economic and political position of the United Kingdom without recognising instability or disadvantage in its international status. They were arguing that leaving the EU would allow the British to strengthen their autonomy in politics, release from EU political interventions and greater control of economic resources or borders (Martin, 2016). The strength of the exit campaign's arguments lies in allegedly evident proves that the EU has limited the ability of the UK to be a prosperous country on its own. Also, that membership reduces national sovereignty, it has introduced disproportionate legal controls, that the EU is run by unjustified bureaucrats and does not take national borders into account as it allows a large number of immigrants to enter Britain. They then are stealing a jobs from domestic Britons and enjoying their welfare and social benefits (Martin, 2016).

The different personalities associated with the exit campaign had their different approaches to influencing the emotions of voters. Conservative MP Michael Gove used a kidnapping analogy where the innocent United Kingdom was held hostage in the back of the car. "Voting for staying in the European Union is equivalent to voting for being hostage-locked at the back of a car which is driving towards deeper EU integration" (Gove, 2016). His party colleague and current Prime Minister Boris Johnson used a worn but working analogy with Nazism to describe the EU's geopolitical ambitions. "The European Union pursues a goal similar to Hitler's efforts to create a strong super-state. Napoleon, Hitler and others tried it and ended up tragically" (Johnson, 2016). On the other hand, UKIP Eurosceptic leader Nigel Farage used more vulgar gestures when portraying migrants as promising sexual predators (Martin, 2016). "Turkey's accession to the European Union would lead to more massive sexual assaults, such as those in the streets of Cologne" (Farage, 2016).

The campaign to remain in the EU was aiming at defending the status quo. The arguments of this camp mainly concerned the economic usefulness of continued membership: the benefits of the single market, rights, freedoms and important international status. According to its members, maintaining EU membership would strengthen (not diminish) the sovereignty of Great Britain and, on the contrary, encourage (not restrict) its autonomy. All the disadvantages resulting from it were for them only minor inconveniences (Martin, 2016). This campaign lacked criticism towards the prevailing order and the ambition to improve further or reform the EU. Most of the arguments were based on factual evidence and the views of experts from the Treasury, the Bank of England, economists, business leaders and even President of United States Barack Obama (Martin, 2016).

3. Problem Solution

News media and social networks

Mass media always play an essential role in influencing public opinion. The way how opinion-forming media, journals, magazines, televisions or radios covered the British referendum campaign was reflected in the outcome of the referendum. Through the media, people were getting valuable information about what could be improved by Brexit in Britain, and of course, the potential threats that might be awaiting them. They also provided people with crucial messages from politicians, as well as experts in various areas of social life, who either supported the campaign to leave or to remain. In addition to traditional print media, television and radio, social networks are increasingly coming to the fore today. On social networks like Facebook, Twitter and Instagram, politicians also ran intense campaigns.

PRIME Research, an international media communications research and consulting agency, has examined the coverage of a referendum campaign in the field of print media. This study examined Tuesday's and Saturday's press releases in the London editions of nine national newspapers during the first three months of the referendum campaign, (from 20th February to 31st of May 2016) (Levy, Aslan, Bironzo, 2016). Of the 1558 articles on Brexit, 41% were in favour of the UK's exit from the EU, with only 27% in favour of remaining in the EU. 23% were categorised as "mixed or undecided" and 9% were neutral. "Of the total number of speakers cited in the articles, 35% were British politicians, of which 70% were Conservatives, and only 13% were Labor, while UKIP speakers were cited in 8% of the articles" (Levy, Aslan, Bironzo, 2016, p.33).

Regarding the particular newspapers, the Daily Express accounted for the largest share of Brexit articles, with up to 75% of all referendum articles inclined to leave the EU, compared to only 5% of those who favour membership. It was followed by the Daily Mail, with 61% of articles for Brexit and only 14% of them were against. Also, most of the articles in The Sun, The Daily Star and The Telegraph have shown a tendency to favour withdrawal from the EU. The newspapers that by most of their articles expressed support for maintaining EU membership were The Guardian, The Daily Mirror, and a slice of the Financial Times. The Times' coverage was the only fairly balanced between the two positions, with a slight prevalence of articles supporting EU exit (Levy, Aslan, Bironzo, 2016). In terms of the issues addressed, economic issues were discussed in particular in the articles of the Financial Times and The Times, while aspects of migration, sovereignty and security collectively assumed a dominant position in the predominantly pro-Brexit Daily Express, Daily Star and Daily Mail (Levy, Aslan, Bironzo, 2016).

Let's move on to television-based news. How well and in balance did the leading news channels cover the referendum campaign? To find out, we will use a study by Cardiff University that analysed the content of the evening television news broadcasts over ten weeks. "We examined the broadcasts on Channel 5 at 17:00, Channel 4 at 19:00 and 22:00 on the BBC, ITV and Sky News to assess not only the balance between the issues, experts politicians and celebrities who were given space in the broadcast but also how television channels regularly reviewed the claims of both campaigns". Overall, we found that about half of the 571 items under our review were related to the referendum, in particular the transmissions dealing with competing party strategies as well as public opinion on the EU and the way people would vote" (Cushion, Lewis, 2016, p.40).

The economy was the main issue addressed during the campaign, which represents more than a fifth of the coverage. This included stories of economic forecasts and trade agreements. The issue of immigration has appeared in only about one in ten researched items, although it sometimes was overlapped with stories about public services, housing and security (Cushion, Lewis, 2016).

As for the people who got the most screen space, it was Boris Johnson who was 8.7% of all appearances for the pro-Brexit camp. Nigel Farage presenting himself as Brexit's most passionate supporter was accounted for only 4.4% of all TV appearances. Among of Brexit opponents, the most significant space had Prime Minister David Cameron with a 7.2% stake, and his Finance Minister George Osborne with a 4.1% stake; Labor President Jeremy Corbyn's share was only 2.4% (Cushion, Lewis, 2016).

In addition to the questions, personalities and political parties involved in the referendum, there was a lack of critical attitudes from non-political sources. If we exclude 12% of the sources that did not express an exclusively favourable or unfavourable view of EU membership, the vast majority of the opinions expressed in the television news reports were political advocates of two competing campaigns. Politicians made 80.2 % of pro-Brexit attitudes, and the remaining 19.8% were opinions of independent experts. On the side of Brexit opponents, it was a bit better, but again, the share of politicians' attitudes was up to 63.7%, and the other 36.3% were independent opinions (Cushion, Lewis, 2016).

More than 4 of the ten items examined included EU statistical claims, but the burden of the independent review was left to journalists. But how did they approach the interpretation of these competitive facts and the numbers of the two campaigns? About a quarter of the newscast items containing statistics were either verified or contextualised by journalists, in other words, 3 out of 4 articles on statistical claims were not subject to any further analysis or additional context (Cushion, Lewis, 2016).

This meant that much of the coverage of the EU referendum was left to the political representatives of the two rival campaigns and their mutual argument shootout. Almost a third of the newscast items surveyed, which included statistics, were arguments between rival camps where journalists did not intervene in any way to verify the integrity or credibility of competing statements. Without much insight and prior knowledge, it was difficult for viewers to understand these claims and counterarguments, regardless of their integrity (Cushion, Lewis, 2016).

Thus, it follows from the study that, while television has given approximately equal scope to both parties, it has not provided sufficient explanation or interpretation, or independent examination, questioning, contextualisation of many statements and statistics so that the public community can sufficiently understand it. Besides, there was little space devoted to the views of independent specialists preferring Brexit or maintaining membership of the European Union.

Despite a ten-week campaign, just a few days before the referendum, one representative survey found that less than a third - 31% of respondents felt well or very well informed about the nature of the vote on leaving the EU. The exchange of arguments between rival camps and a shootout with statistical claims has probably not helped many viewers to understand better the issues affecting them. More regular use of independent analyses could also lead to a better understanding of these issues before people cast their votes into the ballot box. (Cushion, Lewis, 2016).

But was it different in the case of radio broadcasting? The adoption of the British licensed commercial radio sector in 1973 also meant an extension of the regulatory body and the creation of an Independent Broadcasting Authority (IBA) to oversee these regulations and ensure that commercial radio was also impartial in policy matters and other public debates (Starkey, 2016).

However, the regulations on private radios as well as the authorities that supervised compliance have changed over time. Still, the basic principle of commercial radio impartiality has persisted to this day. What these regulations meant for radio coverage of the referendum campaign is clear. The impartiality of the radios meant that the ratio of the arguments made by two adversary campaign camps had to be balanced. In general, for both public and commercial broadcasters was compulsory that any statement by the supporters of the exit had to be confronted with a response by the counterparty, often to almost the same extent, even in the same transmission or shortly after that as provided for in the impartiality regulation (Starkey, 2016).

Again, this balancing act was not very favourable to the campaign for the remain, because the statements of many economic experts, world leaders, entrepreneurs, or celebrities arguing against Brexit had to be immediately confronted by Brexit supporters, often without any further validation or justification. Again, this artificially regulated radio balance could have led to a lack of understanding among the general public of the seriousness of the decisions they were facing. It gave them the impression of a simple choice between binary opposites, which would have a little real effect on Great Britain. In reality, the period immediately after the referendum supported many of the economic claims of the anti-Brexit campaign (Starkey, 2016).

So far, we have found that in the case of the print media, the exit from the EU was more favoured, while on television and radio, the space for both campaigns was roughly balanced thanks to the regulations on the impartiality of such media. But what about the modern phenomenon of social networks, where no impartiality regulation applies and which is being

used daily by more and more people? It was on platforms like Facebook, Twitter and Instagram where both referendum camps were able to unleash their campaigns at full speed and through the Internet daily affecting how people finally decide to vote.

"Just as parliamentary elections in 2015 were characterised as the first digital elections in Britain, the EU 2016 referendum could be characterised as the first digital referendum." (Mullen, 2016). Both official campaigns used vital aspects of the successful Obama model that developed during the 2008 and 2012 US presidential elections, namely large data mining, data analysis, micro-targeting, and social networking to identify and mobilise supporters. (Mullen, 2016).

Both Official Campaigns also received government subsidies of £ 600.000 to finance their activities and received substantial contributions from companies and wealthy individuals. Besides, they both used the Internet and social networks to raise funds, namely to receive modest donations from activists and members of the general public. The Internet and social networks also served campaigns to gather information to create detailed and personalised voter profiles. Analytical software with a built-in algorithm was then used, to assign a score to each potential voter based on the likelihood of a referendum being attended and the probability of voting for leaving or staying (Mullen, 2016).

But most importantly, both campaigns used the Internet and social networks to spread their messages and suggestions. The key message of the exit campaign was "Take Back Control", i.e. regaining control of the country from the EU. The key messages of their competition consisted mainly of highlighting the economic risks associated with Brexit. The leave campaign on Facebook earned 554.297 likes, while the campaign for the remaining 561.277 likes. Both campaigns spent millions of pounds on Facebook and other online presentations (Mullen, 2016).

But it was not just the official campaigns that fought for voters online. Labour and UKIP also ran their own campaigns. The Labor Party itself, favouring of staying in the EU, has spent over £ 1 million on Facebook and other online presentations that have successfully reached 13 million people. UKIP, Nigel Farage and Leave.eu have played an equally important role in achieving Brexit. While they were largely ignored by the mainstream media that centred on the polemic between the pro-European and Eurosceptic wing of the Conservatives, UKIP has contracted with Facebook to disseminate Farage's speeches, campaigns and video recordings, once again reaching millions of people (Mullen, 2016).

Vyacheslav Polonski from Oxford University was also involved in social media campaign research. "Our extensive analysis of social media data shows that Brexit fans not only had a stronger and more emotional message but were also more effective in using social media. We've found that the exit campaign routinely outperformed its opponent, with more loud and active fans on almost all social media platforms" (Polonski, 2016, p.94). This led to the activation of more Brexit supporters at the lowest level and allowed them to fully dominate platforms such as Facebook, Twitter and Instagram, which influenced the choice of undecided voters who did not know what to think. Using the Internet, the camp for leaving could create the impression of broad public support for its cause and attract other Brexit voters (Polonski, 2016).

4. Conclusion

The referendum on the withdrawal of the United Kingdom from the European Union has so far been a unique and unprecedented phenomenon. Several conclusions are drawn from the study:

Why was the EU exit campaign more successful? It could be said that Brexit proponents tried to deliver emotional messages in people, especially by demonising the European Union, they could create strong negative feelings for people. Often these messages did not even have to be based on truth, and it was enough that they emotionally impressed people. On the other hand, it was paradoxically harmful to the opponents of Brexit that the general public could not clearly understand their strict adherence to rational economic arguments. Also, voters may not have liked their satisfaction with the current situation and the lack of ambition to improve further or reform the EU.

Based on a brief analysis of Brexit's media factor, we can say that Brexit supporters have managed their media campaign better than their rivals. We could notice that whether it was news, messages, press, television, radio or social networking information, people were more attracted by direct, intuitive, emotionally charged messages that touched them more emotionally. This is the message that Brexit proponents have used, and apparently ultimately succeeded with this strategy. On the contrary, a paradoxical disadvantage for the supporters of staying in the EU was precisely their rational and logical arguments based mainly on the economy, which people have not always fully understood. So we can say that feelings and emotions ultimately prevailed over rationality. However, the exaggerated impartiality of radio stations and the absence of verification or interpretation of the alleged statements could also have helped to Brexit's victory, as was the case with television, where the lack of space for independent experts to express their opinions could also contribute.

Brexit in the UK, after the European Economic Crisis, the Migration Crisis is another significant reason for the negative sentiment of citizens in the European Union. The authors, therefore, believe that the Council of the European Union and the European Commission can contribute to increasing citizens' credibility towards the European Union by addressing issues that primarily concern EU citizens. "A crucial role is played by the representatives of the Slovak Republic in the European institutions, including members of the European Parliament, who should explain the benefits of EU membership to Slovak citizens" (Bočáková, Lincényi, 2014, p. 50).

The authors also agree with several experts that more intensive citizenship education could increase the positive identity with European Union membership. "The European dimension of education and training is still relevant not only in the old Member States of the European Union but also in the new or future Member States" (Hubálek, Lincényi, Staněk (2018, p. 56).

Last but not least, an effective marketing and media campaign can help improve public opinion on the work of the European Union as well as citizens' confidence in the European institutions. Such a campaign should be carried out throughout the European Union under the coordination of the European Commission. (Lincényi, 2018, p. 433).

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The Importance of the EU-Japan Economic Partnership Agreement

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Abstract

The European Union and Japan are two centres of economic power in the world economy. At the end of 2012, negotiations on the conclusion of the Economic Partnership Agreement (EPA) were launched and the agreement entered into force on February 1st, 2019. Mutual trade under this agreement may be increased by up to one third. Japan will, in particular, liberalize imports of agricultural products and the European Union will liberalize the import of cars. Therefore, this agreement is often referred to as the Car-Cheese Agreement. Implementation of the agreement will be important for Slovak manufacturers, as the commodity structure of Slovak exports to Japan represents cars up to 60%. The increase in trade between the EU and Japan is expected to increase world trade by up to 4%. Increasing demand will lead to an increase in gross domestic product for both partners. The EPA between the European Union and Japan creates the largest free trade area in the world economy of 640 million consumers.

Keywords: economic cooperation, EU, Japan

JEL Classification: F15, F23, F42

1. Introduction

The European Union (19.8%) and Japan (5.6%), two entities of the world economy Triad, make up 25.4% of world GDP and represent a market of over 600 million consumers (Worldometer [online], 2019). Their trade exchange is limited by economic and geographical barriers. Trade barriers preventing the expansion of trade between Member States of the European Union and Japan will also be liberalized through the conclusion of a bilateral Economic Partnership Agreement (EPA). The conclusion of this agreement is a consequence of efforts to expand trade between the European Union and Japan, but also of a long-term crisis of liberalism persisting within the World Trade Organization. The aim of the EPA is to create

new opportunities and to provide legal certainty for trade and investment between the Member States of the European Union and Japan. It is the largest free trade area agreement concluded in the history of the European Union's common commercial policy. Former EU Commission President Jean Claude Juncker described the agreement as an instrument to support the European and Japanese economies. According to Juncker, this is a win-win agreement. In addition to the liberalization of imports, both parties undertook to adhere to the highest standards: labour, safety, environmental protection and consumer protection (European Commission [online], 2018).

2. Literature Review and Methodology

Many authors deal with the issue of the common commercial policy of the European Union and its relations with third countries. We mention the work of Kocourek and Šímanová (2018a) who deal with the impact of one of the already concluded bilateral free trade area agreements between the European Union and Vietnam on the Czech economy. The above-mentioned authors have also prepared a study that analyses the impact of the Economic Partnership Agreement on the Czech economy (Kocourek and Šímanová, 2018b). Other authors focusing their attention to this area of study include Fojtíková (2014) and Staníčková and Fojtíková (2018).

Both qualitative and quantitative methods were used in the paper. Among the qualitative methods it was mainly the analysis of primary and secondary documents of the European Union and available published sources, case studies, observations. Statistical data from international and national databases were evaluated from the point of view of the quantitative methods.

3. Discussion

This part of the article analyses trade exchange between the EU and Japan under the EPA as well as the development of mutual trade between Slovakia and Japan.

3.1 European Union - Japan trade exchange and the EPA

The European Union has concluded several trade liberalization agreements in the form of custom unions with Andorra, San Marino, Monaco and Turkey, in the form of free trade area with the Faroe Islands, Canada, the Republic of Korea, Switzerland and economic partnerships with many African countries. The last major agreements on the development of economic cooperation are two agreements with Japan: the Strategic Partnership Agreement and the Economic Partnership Agreement (Ministry of Economy [online], 2020). We look more closely at the Economic Partnership Agreement in our paper.

Bilateral trade between the Member States of the European Union and Japan is not at a high level. We can define two reasons for this condition. The first, and more important, reason is that both are the most advanced economies with approximately analogous comparative advantages and an analogous commodity export structure. The second reason is the large geographical distance. For the EU Member States, Japan is the 6th largest exporter with a share of 3.3% and the 6th largest importer with a share of 3.6% (European Commission [online], 2020a). The European Union has recorded a long-term passive trade balance with Japan. In 2018, trade between the Member States of the European Union and Japan amounted to EUR 135 070 million, of which exports to Japan amounted to EUR 64 757 million and imports to EUR 70 313 million (Pravda [online], 2019). The annual growth of mutual exchange of goods for the five-year period 2014-2018 was 5.4% in imports and 5.0% in exports. Between 2017 and 2018, imports increased by only 2% and exports by 7%. In the first 10 months (2019) of

the implementation of liberalization measures, trade increased by 6.6% (European Commission [online], 2020c).

The EPA negotiations started between the European Union and Japan in 2013 and were to be completed in 2015. Progress in the negotiations was slow. Unofficially, the agreement is called “car-for-cheese agreement”. It is these items that are strategically important for the parties and have slowed down the negotiations. The EPA was approved by the European Parliament on December 12th, 2018 (Európsky parlament [online], 2018). It entered into force on February 1st, 2019. Japan undertook under the EPA to remove import duties for 97% of the nomenclature of imported goods. The EPA envisages a two-year transition period in which not all liberalization benefits will be applied, such as the elimination of import duties on cars to Japan (Euractiv [online], 2018). The 15-year transition period for the liberalization of imports will cover imports into Japan of certain types of cheese and beef (European Commission [online], 2017a). So far, only 85% of the export nomenclature to Japan will be liberalized for agricultural products (Twitter [online], 2018).

The commodity structure of imports from Japan to the European Union is almost entirely represented by industrial products with a share of up to 99.4%. Exports are also dominated by industrial production with a share of 89.1%. However, agricultural products account for a relatively large proportion of exports to Japan with a share of 10.3% (European Commission [online], 2020b). The importance of liberalizing the export of agricultural products from the European Union to Japan will be dealt with in more detail, as these commodities are politically important export items for some European countries, particularly France. Non-tariff barriers such as different standards for industrial products, attestations, product certification at national level as well as at the level of individual prefectures, consumer protection regulations, labelling of goods, health regulations, etc. also play an important role in imports to Japan. These regulations are particularly stringent when importing agricultural and food products (Slovensky Exporter [online], 2016).

The processes of globalization have led to the Westernization of even eastern, especially rich countries, such as Japan. The consumer habits of the population are changing and demand for traditional branded consumer goods such as footwear, textiles or agriproducts from European Union countries is increasing.

Exports from France, Italy and Spain of agricultural products will be significantly supported by the elimination of customs duties on agricultural products, in particular cheese and wine. From the first day of the EPA, customs duties on imports of wine and sparkling wines, alcoholic beverages were eliminated from 15% to 0%. For imports of fresh meat from 43% and processed pork from 8.5% to 0%. Beef imports will only be liberalized after 15 years from an ad valorem duty of 38.5% to 9%. Japan will abolish customs duties on a number of hard cheeses such as gouda, cheddar, Parmigiano Reggiano, which currently reach 29.8% ad valorem duty, over a period of 15 years (Vajs, 2017). The European agricultural sector will gain access to the Japanese market with the protection of 205 special food and beverage products such as Champagne, Prosciutto di Parma, Tiroller Speck, Münchner Bier, Jambon d'Ardenne, Polska Wódka, etc. (European Commission [online], 2017b).

EPA will increase EU exports of agricultural products and food to Japan: beverages by 20%, wines by 17.3%, sunflower seeds by almost 40%, fresh meat by 12%, frozen beef by 221%, dairy products by 120 %, butter by 47%. Exports of industrial products from the European Union to Japan will also increase: telecommunications equipment by almost 70%, electrical machinery by 16.4%, clothing and clothing accessories by 108.3% (European Commission [online], 2020c).

The most important item of Japanese exports to the European Union are cars. The European Union will abolish 10% import duty on Japanese cars. Once all restrictions have been lifted, export volumes from the European Union to Japan are expected to increase by up to 13% (European Commission [online], 2017c). The production of export goods from the European Union to Japan creates 600 000 jobs in the Member States and in Japan, 550 000 jobs are created through exports to the European Union (European Commission [online], 2017c).

An important area to be liberalized is financial services, e-commerce, telecommunications and transport. The agreement provides European companies with access to public procurement in 48 large Japanese cities and removes obstacles to public procurement in rail transport nationwide. The agreement also addresses the protection of investments and the settlement of trade and investment disputes (Európska komisia [online], 2018). A qualitatively important new feature of the agreement is that its text also includes a concrete commitment to the Paris climate change agreement (France Diplomatie [online], 2019).

3.2 Slovakia - Japan Economic Relations and the EPA

With its economic potential, Slovakia represents a small country in the world economy, accounting for only 0.12% of world GDP (Worldometer [online], 2019), 0.49% of world exports and 0.48% of world imports (TrendEconomy [online], 2019). Slovakia is an economy with a high degree of openness, reaching up to 190% of GDP (96% share of exports in GDP exports and 94% share of imports in GDP) (SME, [online] 2019). The high degree of openness of the Slovak economy is considered to be a limiting factor for economic growth. Japan is one of Slovakia's trading partners. Remarkable is the high trade deficit.

Table 1: External trade of the Slovak Republic with Japan (in EUR million)

Year	Export			Import			Balance
	Total	to Japan	Japan's share	Total	from Japan	Japan's share	
2015	67 680	105	0.155%	67 680	770	1.137%	-660
2016	70 038	71	0.101%	70 038	654	0.938%	-574
2017	74 813	101	0.135%	74 813	611	0.816%	-509
2018	93 443	119	0.127%	92 615	557	0.601%	-438

Source: Statistical Office of the Slovak Republic (2019).

Japan is the 13th largest trading partner of Slovakia outside the European Union. The commodity structure of exports to Japan is represented mainly by cars with a share of 61% (Úrad vlády SR [online], 2019). The EPA, also called JEFTA (Japan - EU Free Trade Agreement), can be a stimulus for the growth of exports from Slovakia. In particular, the removal of technical and regulatory trade barriers is important for increasing exports. The automotive industry will not require duplicate testing and certification of car technical elements. Slovakia exports to Japan consumer goods such as glass products, shoes, lamps and the like. More than 200 Slovak companies export their production to Japan. Export to Japan creates 4,306 jobs in Slovakia. In addition to foreign trade cooperation, investment cooperation is developing between Slovakia and Japan. There are 60 Japanese companies operating in Slovakia, employing about 13,000 employees (SlovenskyExporter [online], 2019).

4. Conclusion

Former EU Trade Commissioner Cecilia Malmström has assessed the effects of the EPA as a tool to simplify customs procedures and remove cross-border barriers to trade, thus finding

opportunities for businesses in both the EU and Japan to increase trade and expand business (European Commission [online], 2019).

To argue that the Economic Partnership Agreement will have a major impact on the economy of both entities would not correspond to reality. Both the Strategic Partnership Agreement and the Economic Partnership Agreement should be seen as a qualitative shift in the relationship between the European Union and Japan. The implementation of the EPA will slightly expand the sales markets of Japanese and European companies due to the fall in consumer prices of imported goods in the EU and Japan and the technical simplification of imports, especially in Japan. It can be stated that the EPA will have a greater political and strategic importance than an economic one.

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The Europe 2020 Targets in the Light of Fashion Luxury Brands' Strategies – A Czech Case Study

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Abstract

The strategy Europe 2020 with its smart, sustainable and inclusive growth aiming at five targets to boost the competitiveness and sustainability in the EU is reaching its apex. It is time to check out and assess how this is reflected by the strategies of European businesses, especially businesses which prima facia should be leading the van and able to afford it. A homogenous sample of 10 European businesses located in Prague and carrying fashion luxury brands was selected, and the information about their competitiveness and sustainability strategies is extracted via a Delphi analysis of their reports, from their e-statements and through direct interviews and mystery shopping techniques. The collected data is classified based on five key targets of Europe 2020, while focusing on the competitiveness and Corporate social responsibility indices and indicators. The exploration by Meta-Analysis and critical assessment of this primary data offers a pioneering bottom-up perspective about the effectiveness and efficiency of the Europe 2020 strategy, along with fresh recommendations.

Keywords: competitiveness, corporate social responsibility, Europe 2020, targets

JEL Classification: D22, K20, M14, O32, O34

1. Introduction

Two decades ago, the global society, including the EU and EU member states, faced a set of economic, financial, real estate, employment and other crises (Tvrdon, 2016). This prompted the European Commission to issue the Com(2010) 2020 final Communication Europe 2020 – A strategy for smart, sustainable, and inclusive growth (“strategy Europe 2020”). For 2010-2020, the strategy Europe 2020 is the key EU policy instrument regarding competition and sustainability (MacGregor Pelikánová, 2019a), which aims at the smart, sustainable and inclusive growth. The strategy Europe 2020 has five main targets – (i) to raise the employment rate to 75%, (ii) to invest 3% of the GDP in R&D, (iii) to reduce greenhouse gas emissions by 20%, (iv) to increase the share of the population with the tertiary education to 40% and (v) to reduce the number of Europeans who are living at or below the poverty level by 25%. i.e. lifting at least 20 million people out of the risk of poverty or social exclusion. These three priorities and five targets are interrelated and translate into seven flagship initiatives. They should be achieved based on a multi-stakeholder model with the awareness and engagement of all stakeholders (Pakšiová & Lovciová, 2019), with respect to their embracing of all three pillars of sustainability – economic (MacGregor Pelikánová, 2019b et 2019c), social (MacGregor Pelikánová, 2019d) and environmental (Grudziński & Sulich, 2018, Polcyn et al, 2019). The competitiveness is endorsed rather in a homogenous manner across the EU (MacGregor Pelikánová, 2019b), while the sustainability is endorsed in a rather heterogenous

manner (Drastichová, 2018; MacGregor Pelikánová 2019c; Staníčková, Melecký, 2014). For businesses, this means that they share the common determination for financial performance and diverge more with respect to their non-financial performance and generally to their sustainability understanding as reflected by their Corporate Social Responsibility (“CSR”), their attitude to the ephemeral philosophical-economical categories of ethics (Galovská, 2018) and fairness (Sroka & Lörinczy, 2015). The effectiveness of the strategy Europe 2020 and its targets is impaired by the competence deficit (MacGregor Pelikánová, 2018), by setting goals which have very little to do with increasing competitiveness and by lacking a common denominator for the competition quality (MacGregor Pelikánová, 2019d), i.e. its fairness (MacGregor Pelikánová, 2017). At the same time, the strategy Europe 2020 has a legitimacy power and politic drive to deal with digital aspects, technological potentials (Balcerzak, 2016) and the sustainability. It pushes the perception of the CSR as a dialogue (MacGregor & MacGregor Pelikánová, 2019) and interaction between businesses, corporations and their stakeholders, one which enjoys a full EU endorsement via policy support (Šebestová et al, 2018). This litigates for the efficiency of the strategy Europe 2020 and its targets. The official results for 2018 provide a colorful picture and translate into mixed feelings. Namely, the targets (i) to raise the employment rate to 75% (so far only 73%), (ii) to invest 3% of the GDP in R&D (so far only 2.12%) and (v) to reduce poverty were not met, while the targets (iii) to reduce greenhouse gas emission by 20% and (iv) to increase the share of the population with the tertiary education to 40% were met (Eurostat, 2020). Considering the trend, the target (ii) to invest 3% of the GDP in R&D appears unlikely to be met in 2020, because, from 1.83% in 2008, it moved only to 2.12% in 2018 while demonstrating dramatic differences between EU member states (MacGregor Pelikánová, 2019c; Nevima et al., 2018). Indeed, manufacturing enterprises achieved the goal of R&D expenditure in the year 2013, but the growth rate of R&D spending has failed to keep pace with GDP growth (Bočková & Meluzin, 2016).

At the EU law level, these targets induced demands for more competitiveness, CSR and e-transparency about them, and led to the enactment of many instruments. These include Directive 2013/34/EU annual financial statements, consolidated financial statements and related reports, Directive (EU) 2017/1132 relating to certain aspects of company law and Regulation (EU) 2015/884 establishing technical specifications and procedures required from the system of the interconnection of registers, aka BRIS, via the portal e-Justice (MacGregor Pelikánová, 2019d). These rules are partially mandatory, partially facultative and do not apply to all businesses in the EU, nevertheless their legal reach is coupled with other concerns, such as marketing, and consequently businesses go ahead and make available their annual reports, post such information on their websites placed on their Internet domains and provide further data if asked (interview) or if observed (mystery shopping). This myriad of resources can offer an interesting insight of the (lack of) synergetic and symbiotic co-existence of the Europe 2020 targets with business strategies for competitiveness and CSR. Such an exciting proposition can be materialized via a case study of a homogenous sample of businesses from an industry which is dominated by extrovert, perhaps even extravagant, attitude to such objectives – top luxury fashion. Such a case study is done while exploring 10 top luxury fashion businesses operating in the Czech version of 5th Avenue, Pařížská street, and their data in this respect in a proper methodological manner (2.). This leads to a pioneering finding and revealing arguments allowing problem solution (3.) and culminating in conclusions (4.).

2. Problem Formulation and Methodology

There is an obvious burning question touching the very heart of the strategy Europe 2020 – has it managed to reconcile its targets even at the lowest level, i.e. do businesses in the EU transparently e-publish about their drive for the competitiveness and CSR while following the

five targets of the strategy Europe 2020 and do they do the same via their tangible setting, i.e. shopping experiences. For such a case study, the luxury fashion with its inherent features appears to be an excellent candidate. Sustainability is a central challenge of the fashion industry (Cerchia & Piccolo, 2019). For luxury fashion businesses, the key values and competitive advantage determinants are linked to their luxury brands representing scarcity, exclusivity and superiority, coupled with commercial success and a CSR excellency aura (Kale, & Öztürk, 2016). They desperately need to come across as being for CSR and able to afford CSR, at least based on the expectations of their customers (Olšanová et al, 2018) and their potential investors. Their exploration can be done based on a case study of basically all of them as operating in one EU member state, e.g. 10 top luxury fashion businesses in Pařížská.

2.1 Data – the Sample and Sources of Information

The case study includes top luxury fashion businesses from Pařížská and the sources of information are their reports for 2018, websites posted on their Internet domains, their current Codes of Ethics and direct interviews coupled with indirect indices generated by mystery shopping visits, i.e. by a field search in December 2019.

Table 1: Case study – 10 Luxury Fashion Businesses and Their Case Study Parameters

	Origin	Group	Address	Domain	EthCod	Interview with emp.
Louis Vuitton	1854 Paris	LVMH	3	louisvuitton.com	2009	DŠ, PV
Gucci	1921 Florence	Kering	9	gucci.com	1996	MR, LH
Dolce & Gabbana	1985 Milano	-	28	dolcegabbana.it	online	MM
Prada	1913 Milano	-	16	Prada.com	2007	MK, ER
Christian Dior	1946 Paris	LVMH	4	Christiandior.com	2009	EF, LŘ
Fendi	Paris	LVMH	12	Fendi.com	2009	DF
Furla	1925 Rome	-	8	Furla.com	-	MF
Tod's	1920 St.Elpi.	-	13	Lbm.cz tods.com	Large CSR rep	MA
Bulgari	1884 Epirus	LVMH	13	Bulgari.com	2009	VM
Bottega Veneta	1966 Vicence	Kering	14	lbm.cz	1996	VA

Source: Prepared by the authors based on Information from Websites of these businesses

Based on conventional accounting criteria, the largest of these ten luxury fashion businesses are LVMH, with assets of EUR 128.555 billion, revenue of EUR 46.826 billion and over 145 thousand employees, Kering, with assets of EUR 21.367 billion, revenue of EUR 13.665 billion and over 30 thousand employees, Prada, with assets of EUR 4.687 billion, revenue of EUR 3.910 billion and over 12 thousand employees, and Tod's, with assets of EUR 1.077 billion, revenue of EUR 0.963 billion and over 3 thousand employees. These four leaders

extensively publish on their websites and in their Codes of Ethics about their strategies, while their front-line employees facing the clientele in Pařížská and the setting of these shops provide clear indices and even information about these strategies as well. This generates data for methodologically acceptable processing with quantitative and qualitative aspects with respect to five targets of the strategy Europe 2020, competitiveness and CSR dimension.

2.2 Methods

The exploration and processing of such data is done by using the text analysis, aka content analysis (Kuckartz, 2014), which makes replicable and valid inferences about texts and is considered as an established research method, even with respect to business ethics and CSR issues (MacGregor Pelikánová, 2019b). The quantitative content analysis is done by an automatic scanning of the number of key words. The qualitative content analysis is performed via a simplified Delphi method (MacGregor Pelikánová, 2019a) entails a manual assessment by three independent experts (CL, LM, ZUP) while using (+) or (++) or (+++) scale. The classification is done based on five key targets of Europe 2020, while focusing on the competitiveness and Corporate social responsibility indices and indicators from all six well established CSR categories: a) environment protection, b) employee matters, c) social matters and community concerns, d) respect for human rights, e) anti-corruption and bribery matters, f) R&D activities. The Table below indicates the key parameters for the quantitative analysis.

Table 2: Comparative Table – 5 Europe 2020 Targets v. 6 CSR Categories

5 Targets	Empl rate 75%	3% GDP in R&D	Emission by 20%	Education to 40%	Poverty at 25%/20mil	N/A
Key Word	Employee	R&D	Environm.t	Education	Social	N/A
6 CSR Categories	Environment protection	Employee matters	Social matters	Human Rights	Anti- Corruption	R&D
Key Word	Environment	Employee	Social	Human Right	Anti- Corruption	R&D

Source: Prepared by the authors based on their prior studies about the strategy Europe 2020 and CSR (MacGregor & MacGregor Pelikánová, 2019, MacGregor Pelikánová, 2019a)

Table 2, above, reveals that the five main targets (i-vi) of the strategy Europe 2020 and six key CSR categories (a-f) significantly overlap. This is instrumental for the exploration by the Meta-Analysis and critical assessment of this primary data and offers a pioneering bottom-up perspective about the effectiveness and efficiency of the Europe 2020 strategy, along with fresh recommendations. Namely, whether there is a synergetic match (effectiveness) and whether it is applied (efficient), i.e. whether the five main targets induce business to do good things (effective) in a good manner (efficient).

3. Problem Solution

From the general above perspective with macro features, it appears that the EU is not about to meet all five of its targets set by the strategy Europe 2020 and that there are serious questions about their effectiveness and efficiency, see especially the, perhaps most competitiveness and sustainability determining target (ii), to invest 3% of the GDP in R&D (MacGregor Pelikánová, 2019c) which can be instrumental in meeting all other targets – IP assets have a positive effect on employment, environment, wealth, etc. and are instrumental for a competitive advantage in the 21st century. Well, since sadly the EU in general is behind in this respect, way behind the USA and Japan (MacGregor Pelikánová, 2019c), then there is at least

a hope that European businesses embrace these targets, especially if these businesses attempt to come across as pro-competition, pro-sustainability, etc. and want to do this rather in an opulent and extroverted manner. Indeed, all top 10 luxury fashion businesses from Prague go ahead and proudly, publicly and freely go above and beyond the demands set by the above mentioned Directive 2013/34/EU, Directive (EU) 2017/1132 and Regulation (EU) 2015/884. Their 2018 CSR reports are available and can be assessed with respect to all 5 targets and 6 CSR categories. Since there is a strong title overlap, 7 columns are used – 5 targets including 4 CSR categories with 2 CSR categories literary not covered by the 5 targets.

Table 3: 2018 CSR Reports – Frequency of Key Words / Quality of Information

Target (categ) / Group (pages)	Emplo. (Empl.)	R&D (R&D)	Emiss (Envir)	Educat.	Poverty (Social)	(Human Rights)	(Anti-Corrupt)
LVMH (54)	143/+++	6/+	20/+	15/++	70/++	54/++	2/+
Kering (38)	67/+	4/+	44/+++	2/+	25/+	11/+++	1/++
Prada (244)	43/++	9/+++	15/+++	3/+	11/++	0/	+
Tod's (277)	178/++	15/++	66/+++	6/++	51/+++	7/+++	0

Source: Prepared by the authors based on CSR reports available on own Internet domains

Similarly, all these businesses have freely available Codes of Ethics addressing 5 targets and 6 CSR categories, while 4 categories literary overlap and so we have again 5+2 columns.

Table 4: Codes of Ethics – Frequency of Key Words / Quality of Information

Targ.(cat) / Group (yr, pag)	Emplo (Empl)	R&D (R&D)	Emiss (Envir)	Educat.	Poverty (Social)	(Human Rights)	(Anti-Corru)
LVMH (2017,32)	71/+++	2/+	52/++	2/+	22/++	6/+++	22/++
Kering (2019,32)	52/++	1/+	31/+++	2/+	6/++	13/++	4/++
Prada (2018,12)	18/++	0/0	4/++	0/0	1/+	0/0	3/++
Tod's (2018,24)	44/++	0/++	16/++	0/0	11/++	0/0	5/++

Source: Prepared by the authors based on Codes of Ethics of business available on domains.

Via Websites on their Internet domains and the field search performed in December 2019 via shopping experiences employing direct interviews and indirect mystery shopping techniques, the observed businesses reveal highly interesting messages regarding the competitiveness and CSR messages, as summarized in the table below.

Table 5: Competitiveness and CSR Indices from Websites and Field Search

	Competitiveness		CSR	
	Own Websites	Field search	Own Websites	Field search
Louis Vuitton	Heritage & Savoir-Faire, Ongoing capucine	Luxury of mass production	LV for Unicef; Environment – monitoring suppliers; x counterfeiting	Animal welfare important; problems with counterfeiting
Gucci	Eclectic, contemporary, romantic; Horsebit again	Sustainability (CSR); equestrian tradition	Gucci equilibrium – CEO carbon neutral challenge	Top animal welfare; energy self-sufficient; no recycling !!!
Dolce & Gabbana	Contemporary DNA; all ages	North v. South Italian family	-	-
Prada	Prada sphere	Differentiation; pricing	Prada Foundat.; Sustainability	Free fur; energy sufficiency
Christian Dior	Tradition, same models and lines	Scarcity, rigidity	-	vague
Fendi	Fun fur; free shipment	Fun fur, exchange accessories	LIFE 2020 – emiss, reduction, production cycle	vague
Furla	Pricing, not truly luxury	Pricing, not truly luxury	-	-
Tod's	Tradition; new high-tech mater.	-	Social and envir.commit	-
Bulgari	Jewelry elements, luxury	Jewelry elements, luxury	Climate change; supply chain	Child care, animal care
Bottega Venetta	Playing with colors	Playing with colors	-	-

Source: Prepared by the authors based on businesses' domains and own field search

Although the study entails rather a micro sample, it conveys a very clear and robust message. Firstly, the sample is homogenous and complete. Secondly, the extracted data, and by holistic Meta-Analysis processed information, reveals a dramatic split between literary and purposive interpretations of the set targets and realized CSR categories. Boldly, the strategy Europe 2020 is setting targets which are partially repeated by these businesses, but a deeper understanding suggests that often these businesses give them a different meaning, e.g. reduction of emissions does not overlap with environment protection category, see the table below.

Table 6: Europe 2020 Targets and Their (no) Overlap with CSR Categories

Target x CSR cat.	Empl rate 75% x Employees	3% GDP in R&D x R&D	Emission by 20% x Environ.	Poverty x Social	Education
Indices	Employment x benefits	Investment x hand-craft	Emission x AniWelfar	Poverty x select.aid	Gener. edu. x ind.train.
Assessm.	Partial overlap	Minimal overlap	Variable overlap	Partial overlap	Partial overlap

Source: Prepared by the authors based on CSR reports available on own Internet domains

The strategy Europe 2020 has five main targets which are definitely understood and applied differently by luxury fashion businesses, i.e. these businesses departed from the EU proclaimed determinants for the smart, sustainable and inclusive growth as spelled out in these 5 targets. For luxury fashion businesses the target (i) to raise the employment rate to 75% is absolutely irrelevant, they are not interested in creating jobs and often they are even not interested in their own employees (Louis Vuitton, Christian Dior). Similarly, they are not engaged in R&D spending and only some of them show a genuine interest in innovations and creation (Fendi). Perhaps the most agitated discussion entails the target to (iii) to reduce greenhouse gas emission by 20%, some businesses endorse it completely (Gucci, Prada) while others totally pass on it (Dolce & Gabbana). The CSR category – environment protection is often overplayed and leads to extremes such as focusing more on the welfare of reptiles than people (Gucci) and the move to free-fur (Prada) represents a high environmental risk to lead to non recyclable materials. The target (iv) to increase the share of the population with the desired minimum level of education is taken into account occasionally by random individual projects of some businesses (Bulgari). The target (v) to reduce the number of Europeans who are living at or below the poverty level by 25% and other appeals to charity is projected into selective programs endorsed by some businesses (Prada, Tod's).

4. Conclusion

The strategy Europe 2020 with its smart, sustainable and inclusive growth will reach only partially its five targets and its support to competitiveness and sustainability is questionable. The EU desire to be the top economic power and global leader, and not just in the economic field, remains a dream. Undoubtedly, the EU has good intentions and all five targets appear *prima facie* positive, but a deeper look into the lack of the EU competency reduces their correctness, appropriateness and ultimately effectiveness. The EU seems to end by meeting them only partially, and so the efficiency is far from perfect. Nevertheless, the strategy Europe 2020 is at least an inspiration and perhaps even aspiration for European businesses, especially proudly advertising their competitiveness, CSR and generally their capacity to go for top goals, sounding very much as the mentioned five targets. However, this *prima facie* impression and merely content quantitative scanning of data provides a picture which is strongly challenged by a deeper qualitative analysis involving even the field search. A micro case study regarding a homogenous sample of 10 European businesses located in Prague and carrying fashion luxury brands has been performed with unexpected results. The information about their competitiveness and sustainability strategies was extracted via a Delphi analysis of their reports, from their e-statements and through direct interviews and mystery shopping techniques. The collected data was classified based on five key targets of Europe 2020 and 6 CSR categories. This exploration by the Meta-Analysis and critical assessment offers a pioneering bottom-up perspective about the effectiveness and efficiency of the Europe 2020 strategy. Businesses do literary follow these targets but they give them different meanings and so the synergetic efficiency of these endeavors is undermined. This leads to burning issues and questions which call for future research. Who is right – EU with targets or businesses with their CSR? Which perspective is more appropriate – by EU or by businesses? Is effective the EU with its five targets or businesses with their understanding of six CSR categories? Since the Europe 2020 targets look very different in the perspective of fashion luxury brand strategies, perhaps the most important question is not how different are these targets and categories, or who is right, but why do we have this dilemma. Indeed, this should be the top priority for future research. Without addressing that, the EU and Europeans do not understand their own foundations and consequently could hardly succeed in the next decade.

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The State of Innovation in Enterprises of the SME Sector in Poland

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Abstract

The present paper forms an attempt to characterize the state of innovation in the sector of small and medium enterprises in Poland. Innovation is the result of complex relationships and interactions among multiple actors, and among the special role played by small and medium-sized enterprises. Innovations in companies developing intensively in favorable conditions. Companies are forced to adapt to changes in the dynamic environment. To meet this challenge shall take measures to improve the attractiveness and market position. A company which refrains from implementing modifications or reacts too slowly to phenomena occurring in its environment is simply likely to collapse. The innovativeness of Polish companies is rather low, that innovations aren't basic mean of managing Polish companies, especially in SME sector.

Keywords: enterprise, innovation, SME sector

JEL Classification: D20, D21, D22

1. Introduction

Companies are forced to adapt to changes in the dynamic environment. To meet this challenge shall take measures to improve the attractiveness and market position.

Innovation is the result of complex relationships and interactions among multiple actors, and among the special role played by small and medium-sized enterprises. Innovations in companies developing intensively in favorable conditions.

Poland has one of the lowest rates of innovation in Europe and ranks 24th out of the 27 members of the European Union. At the same time, Poland has one of the lowest rates in the expenditure on research and development among the countries of the European Union.

A major problem is the insufficient cooperation economic and scientific environments, the low level of implementation of new technologies and the low number of new companies created on the basis of new technologies as well as the problem of financing innovation.

In developed market economies, there is one deeply-rooted assumption which entrepreneurs have only recently started to realize, namely that the capability of enterprises to absorb innovations is one of the most important manifestations of their modern character, effectiveness and productivity. Therefore, nowadays, innovations are considered as a rudimentary factor of the development of enterprises, a factor which contributes to the enrichment of the market in new high-quality products and services, as well as organizational reconstructions inside the enterprise and of its environment.

Innovations and innovativeness should be seen as a broad and complex set of resources meant to improve the capability of management, to establish firm competitive positions, as well as

to make it possible for enterprises, national markets and societies to gain economic profits. The capacity to obtain such benefits is realized through the category of competitiveness (Świtalski, 2005).

Innovations play a decisive role when it comes to a company's competitiveness, i.e. its capability to survive on the market. The fact that much attention has been paid to innovativeness as a factor shaping competitiveness is attributable to several premises. First of all, innovativeness is a factor that is bound to many other factors influencing the improvement of competitiveness, both at input and output, which suggests an impact on the general efficiency of a company's actions. Secondly, the impact of innovations on the remaining factors from the point of view of competitiveness generally has a synergically positive character; it is possible to prove that innovations have a strong influence on the shape of market demand (Bał-Woźniak, 2006). Therefore, a popular claim that the introduction of innovations is hazardous is not true; on the contrary, the lack of innovations may jeopardize a company's well-being (Bogdanienko, 1998). The conclusion is clear: the introduction of innovations should form a part and parcel of a strategy of every enterprise.

2. Essence of Innovation

Changes constitute the main challenge of the 21st century. They may concern systems, countries, branches of economy, enterprises, departments, organizational units, as well as the human being. In the age of increased competition, enterprises are forced to continually search for methods and techniques aimed at improving their actions. The changes dealt with by every business entity are related with both closer and more distant environment. There emerge new companies which are bound to compete with the already existing entities (Łopatowska, Zieliński, 2012).

Changes occurring in small companies are especially interesting ones. On the one hand, they are easy to implement since small business entities show significant flexibility. Nevertheless, it is difficult to initiate and then implement them due to psychological barriers or limited financial resources. The philosophy of preparation and introduction of a change is actually invariable. However, its kind, scope, complexity and duration of implementation determine the way in which its methodological and terminological apparatus is subsequently modified (Bitner, 2013).

Currently, innovativeness is one of the most crucial factors determining business competitiveness. The global crisis actually forces the necessity to implement changes in various fields of activity of contemporary enterprises.

Nowadays, innovations constitute the ultimate driving force of the development of economy (Stopochkin, Sytnik, 2020). They form a specific tool of resourcefulness, which (when understood as a constant search for new combinations of productive factors) is in turn a driving force of economic advancement (Penc, 1999).

The development of an enterprise is equivalent to a coordinated chain of system changes, which make the enterprise adapt to the continually changing environment (Pyplacz, Liczmańska-Kopcewicz, 2018).

An innovative enterprise combines three crucial elements in its scope of action: the creation of a novel idea, putting it into practice, and its final realization. In more general terms, an innovative enterprise can be described as one that is capable of continuous searching for and making use of scientific studies, novel concepts, ideas and inventions. In a contemporary market game, innovations are likely to become a competitive advantage. The enhancement of

business competitiveness depends on identifying and shaping the most crucial elements determining a company's condition.

3. Innovative Potential of Small and Medium Enterprises in Poland

In Poland, the sector of small and medium enterprises is still an important driving force of the economy due to the fact that it determines the level and structure of employment as well as the degree of prosperity of the Polish society. Small and medium companies come across various obstacles including: difficulties to find an access to financial resources that hinder the engagement in scientific and developmental research, as well as a limited access to specialized knowledge and the lack of experience in running a business activity. These companies find it difficult to manage know-how resources, fail to determine goals and control information flow both within their internal structures and relations among partners.

In the sector of small and medium companies, there are visibly fewer implementations of innovations than in big enterprises. This is related to the scope of activity of smaller entities, which more often focus on one type of a product or service, so the probability of modifications is smaller than in case of enterprises with a diversified portfolio and complex processes (Wojnicka, Klimczak, 2008). The interest showed towards tenders for subsidies to innovative projects clearly confirms that entrepreneurs aspire to develop their companies' innovativeness; they have ideas and draft projects to implement innovations, while they intensely search for less expensive sources of financing this type of activity (Kurowska-Pysz, 2012).

The dynamics of changes in the environment of business entities forces entrepreneurs to implement innovations, both classic technological, and non-technological ones. However, nowadays we observe an increased share of introduced non-technological improvements in the sector of small and medium enterprises.

The potential increase of innovativeness of the sector of small and medium enterprises in Poland corroborates the tendency to focus more on non-technological innovations, rather than classic technological ones.

In Poland, the sector of small and medium enterprises is still an important driving force of the economy due to the fact that it determines the level and structure of employment as well as the degree of prosperity of the Polish society. The entities within the sector of small and medium enterprises constitute 99,8% of the total number of companies (1,67 million). However, the sector is dominated by micro-companies, which make up as much as 96% of all business entities (PARP [online], 2020).

Small and medium companies come across various obstacles including: difficulties to find an access to financial resources that hinder the engagement in scientific and developmental research, as well as a limited access to specialized knowledge and the lack of experience in running a business activity. These companies find it difficult to manage know-how resources, fail to determine goals and control information flow both within their internal structures and relations among partners.

The dynamics of changes in the environment of business entities forces entrepreneurs to implement innovations, both classic technological, and non-technological ones. However, nowadays we observe an increased share of introduced non-technological improvements in the sector of small and medium enterprises.

Apart from the possibilities offered by organizational or marketing innovations to non-profit and governmental units, the factor that exerts essential influence on the increased significance

of non-technological innovativeness is an increasing number of micro-, small and medium companies. This increase, as well as considerable diversification of business activities run, is bound to contribute to the fact that more focus and attention will be drawn to those innovations whose implementation will not demand from entrepreneurs incurring high costs of research and development-oriented actions (Sadkowska, 2011).

A research conducted by the Polish Confederation of Private Employers *Lewiatan* regarding the innovativeness of Polish enterprises showed that the idea of building a company's competitive position based on innovations is not favored by Polish managers. Definitely, the majority of managers declare that they prefer actions aimed at cost saving, and in turn decreasing the prices of products. The low level of work efficiency in Poland is associated with poor technical equipment and a small scale of digitization of Polish companies. Low labor productivity compared to other EU markets forces competing with prices and causes that both labor and capital are poorly paid in Poland. This situation cannot be changed without investing in modern technologies (Konfederacja Lewiatan [online], 2020).

Many entrepreneurs from the SME sector are afraid to invest large (proportionally to generated revenues) funds in innovation. Others - although they have excellent ideas - struggle with the lack of adequate funds. With them in mind, the "Vouchers for Innovation for SMEs" program was run, run by the Polish Agency for Enterprise Development, in which entrepreneurs can receive a total of up to PLN 900,000 in funding.

Innovation vouchers are one of the most popular, affordable programs supporting innovation for micro, small and medium enterprises. Vouchers are a two-stage offer. In the first, entrepreneurs can apply for funding for the services of scientific units to develop an innovative product or process. After successful implementation of such a project - that is, formally, after Polish Agency for Enterprise Development accepts, the final payment application - entrepreneurs may apply, in the second competition, for funds for the implementation of already developed solutions (PARP [online], 2020).

The governments must stimulate the innovation and technical progress, in order to record growth and to be competitive in the global knowledge economy (Strielkowski, Ehrenberger, Karnauch, Alikperov, 2016).

Although it is believed that the SME sector is mainly responsible for the dynamic process of diffusion of new developments in the local and regional market (endogenous growth theory) whereas their technological level is not important. In Poland, owners of micro enterprises are reluctant to take risky actions. It seems advisable for the national innovation policy to take into account the need for different pro-innovation mechanisms for different sized companies to better support the development, absorption and dissemination of new technologies. (Świadek, Dzikowski, 2018).

4. Conclusion

Both business theorists and practitioners generally agree that innovations form one of the most crucial factors of enterprises' competitiveness. A company which refrains from implementing modifications or reacts too slowly to phenomena occurring in its environment is simply likely to collapse. The present article forms an attempt to characterize the process of change implementation in the sector of small and medium enterprises. On the one hand, these modifications seem easy to carry out because small companies are flexible, but on the other hand it is difficult to launch the process due to the existence of psychological barriers or limited financial resources. The dynamics of changes in the environment of business entities forces

entrepreneurs to implement innovations, both those technological and classic, and non-technological ones. Meanwhile, nowadays we can observe an increased share of introduced non-technological innovations in enterprises belonging to the sector of small and medium companies.

However, the most problematic issues include: insufficient cooperation between economic and scientific groups, a scarce number of newly introduced technologies and a corresponding low volume of new business entities founded on the basis of new technologies, as well as gathering resources necessary to finance innovations.

A consistent conclusion from many reports prepared, both in our country and in the European Union, in many industries competitiveness and innovation is still too low and requires dynamism. The European Commission even noted in its report that despite previous efforts to improve the research and development framework, as well as significant support received from EU funds, Poland's results in terms of innovation are still modest. There are many barriers to the innovative activity of enterprises.

The potential increase of innovativeness of the sector of small and medium enterprises in Poland corroborates the tendency to focus more on non-technological innovations, rather than classic technological ones.

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The Attitude of Non/Family Firms to Corporate Social Responsibility and the Ethics of Entrepreneurship

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Abstract

The project's objective is to identify the differences in the attitudes of family and Nonfamily firms in the given sphere (i.e. the preparedness for crisis, application of tools and principles of human resources management, the attitude towards corporate social responsibility, entrepreneurial ethics, financing and performance while identifying the level of influence of the family of the family firm) in the Czech Republic. Within this project 150 family firms and 150 Nonfamily firms have been addressed. The interconnecting of economics and ethics is the sphere of interest of entrepreneurial ethics, which is an applied form of general ethics. CSR may be of a large contribution for the sphere of human resources in the firm, and this contribution may be of two types. The research based on questionnaires focuses on family and nonfamily firms in the Czech Republic that have incorporated corporate social responsibility and ethical behaviour in business. On the basis of selected questions respondents from family as well as nonfamily firms responded. Questions were the same for all the types of firms.

Keywords: business, corporate social responsibility (CSR), ethics, non/ family firms

JEL Classification: A12, A14, A30

1. Introduction

The project's objective is to identify the differences in the attitudes of family and Nonfamily firms in the given sphere (i.e. the preparedness for crisis, application of tools and principles of human resources management, the attitude towards corporate social responsibility, entrepreneurial ethics, financing and performance while identifying the level of influence of the family of the family firm) in the Czech Republic. Within this project 150 family firms and 150 Nonfamily firms have been addressed.

Although corporate social responsibility is a term of modern times, the meaning of this issue is as old as mankind itself. The issue of own credit and how to achieve goals with or without regard to others is one of the main themes of ethics. (Kuldová, 2010)

Even though the term CSR is currently talked about much, similarly as with other terms from the sphere of humanitarian and social sciences its definition is not unified and there are varying opinions about what this notion includes and what it does not. This variability was noticed by American theoretician D. Votaw as early as the 70ies and he expressed his view in words that capture well the past and the current situation: "The term social responsibility is a brilliant one; it means something but not always the same thing, to everybody. (Web of science[online],2016)

To some it conveys the idea of legal responsibility or liability; to others it means socially responsible behaviour in an ethical sense; still to others, the meaning transmitted is that of “responsible for” in a casual mode; many simply equate it with “charitable contributions”; some take it to mean socially “conscious” or “aware”; many of those who embrace it most fervently see it as mere synonym for “legitimacy” in the context of “belonging” or being proper or valid; a few see it as a sort of fiduciary duty imposing higher standards of behaviour on businessmen than on citizens at large.” (Crane, 2008, p. 31).

We will find practically the same definition in the materials of the Business Leaders Forum, which is an international platform for CSR managers. In the end a concise definition of CSR from the Anglo-Saxon environment, which is again in harmony with the previous ones, but newly it also includes an obvious emphasis on the strategic dimension of the CSR concept, which should be applied in the organisation with the idea of long-term sustainability of the practice set up this way. “Corporate social responsibility is a long-lasting obligation of the firm to contribute to the economic development and, at the same time, behave ethically – to improve the quality of life of their employees and their families as well as of the local community and society.” (Crowther, Capaldi, 2008, p.151)

The corporate crisis basically consists of two elements: First, an institution (or set of institutions) faces more cases than it is able to handle in a given state. Second, the problems of pressure, the solution of the problems of this institution threatened in the short term its transformation or development, with the loss of irreparable damage

1.1 The Ethics + CSR

The interconnecting of economics and ethics is the sphere of interest of entrepreneurial ethics, which is an applied form of general ethics. Thus, a field has been born that deals with the fragile relation between the ethics and economy and studies the topics that are viewed quite differently from the viewpoints of ethics and economics. For example, profit, which is a priority from the strictly economic view, is from the viewpoint of ethics almost something immoral.

Or to be more precise, the profit itself is not immoral, but if its maximizing is the main objective the ways to achieve this are often inconsiderate and immoral. Other typical topics are justice, responsibility etc. CSR has also the ambition to interconnect ethical and economic principles in a way that the created model may become functional and practically applicable for the business sphere. Theoretical foundations of ethics and entrepreneurial ethics and therefore among the main sources from which CSR grows.

Corporate Social Responsibility (CSR) is a concept whereby companies openly acknowledge their shared responsibility for the state and running of a company. Almost no company works not only in its economic relations, but also has a strong influence on the external environment (community, social situation of employees, etc.) and, on the contrary, stakeholders influence the company's success. Therefore, according to the SOF concept, organizations complement their traditional economic goals with goals aimed at the benefit of society (expansion of a strategic company with environmental, social, ethical, and community aspects). CSR is a trend that changes the orientation of companies from short-term to long-term goals and prefers optimal profit over maximum. Socially responsible corporate behavior is essentially a long-term investment in overall development. (Crowther, Aras[online], 2018)

CSR can be performed in two ways, internally or externally. Internal evaluation should be part of the CSR system, within the organization itself. As regards external evaluation, third-party evaluation is therefore of the opinion that it is very important. The reason for the importance

of a third party is also provided by the Czech Quality Council, which states that: Any trends to improve results, unless a follow-up check is necessary to convey truthful information to stakeholders where feedback is needed and opinions and benchmarks are standardized. (Prachar, J and Ryšánek, P.,2008)

Innovation is next critical factor in the relationship CFP(corporate financial performance) and corporate social performance as it enables organizations to respond to new economic, social and environmental challenges faster and better than organizations that are not able to innovate. Therefore, the investment of financial resources in innovation initiatives is one of the most important levers to pursue and to increase CSP (corporate social performance). (Web of science [online], 2018)

1.1.1 How should Europe look in 10 years' time?

Europe's strategy for the next decade should focus not only on rates of growth and employment, but also on how growth can help build a better, fairer society, a more sustainable economy and a more secure prosperity for all, at home and globally, less vulnerable to financial sector greed and excess.

For most Europeans, the priorities for the next decade would surely include:

1. A new deal for sustainability
 2. High quality full employment with decent work and social inclusion for women and men
 3. The fight against poverty, inequality and insecurity
 4. A high-productivity knowledge economy
 5. Social and territorial cohesion
 6. Shaping a fair globalization that benefits all
- (European union[online], 2016)

2. Data analysis

The research based on questionnaires focuses on family and nonfamily firms in the Czech Republic that have incorporated corporate social responsibility and ethical behaviour in business. On the basis of selected questions respondents from family as well as nonfamily firms responded. Questions were the same for all the types of firms. The questions were as follows:

- 1) Has your firm defined a strategy of corporate social responsibility?
- 2) Have you established an ethical code?
- 3) Do you inform about your activities of corporate social responsibility?
- 4) Are your employees regularly and systematically informed about the performance of socially beneficial goals?
- 5) Do you support your employees in the development of skills and long-term development?
- 6) Have you established an environmental strategy / policy?

2.1 Model and Data

In the first table I analyse the selected six questions which analyse the attitude of family and nonfamily firms to corporate social responsibility and ethics.

Table 1: Comparison of results – values

Q. no.	Question	Type	Yes	Rather yes	Rather not	No
1	Has your firm defined a strategy of corporate social responsibility?	Fam	52	0	0	93
		Nonfam	59	0	0	90
2	Have you established an ethical code?	Fam	46	0	0	99
		Nonfam	63	0	0	86
3	Do you inform about your CSR activities?	Fam	44	0	0	101
		Nonfam	52	0	0	96
4	Are your employees regularly and systematically informed about the performance of socially beneficial goals?	Fam	26	45	50	23
		Nonfam	20	39	58	30
5	Do you support your employees in the development of skills and long-term development?	Fam	49	58	33	6
		Nonfam	49	73	22	4
6	Have you established an environmental strategy/ policy?	Fam	64	0	0	81
		Nonfam	88	0	0	59

Source: own elaboration

Table number 2 analyses differences in percentage between family and nonfamily firms in relation to the attitude to corporate social responsibility and the ethics of business.

Table 2: Comparison of results – percentages

Q. no.	Question	Type	Yes	Rather yes	Rather not	No
1	Has your firm defined a strategy of corporate social responsibility?	Fam	36%	0%	0%	64%
		Nonfam	40%	0%	0%	60%
2	Have you established an ethical code?	Fam	32%	0%	0%	68%
		Nonfam	42%	0%	0%	58%
3	Do you inform about your CSR activities?	Fam	30%	0%	0%	70%
		Nonfam	35%	0%	0%	65%
4	Are your employees regularly and systematically informed about the performance of socially beneficial goals?	Fam	18%	31%	35%	16%
		Nonfam	14%	27%	39%	20%
5	Do you support your employees in the development of skills and long-term development?	Fam	34%	40%	23%	4%
		Nonfam	33%	49%	15%	3%
6	Have you established an environmental strategy/ policy?	Fam	44%	0%	0%	56%
		Nonfam	60%	0%	0%	40%

Source: own elaboration

Table no. 3 analyses in a simpler way the differences in percentage between family and nonfamily firms.

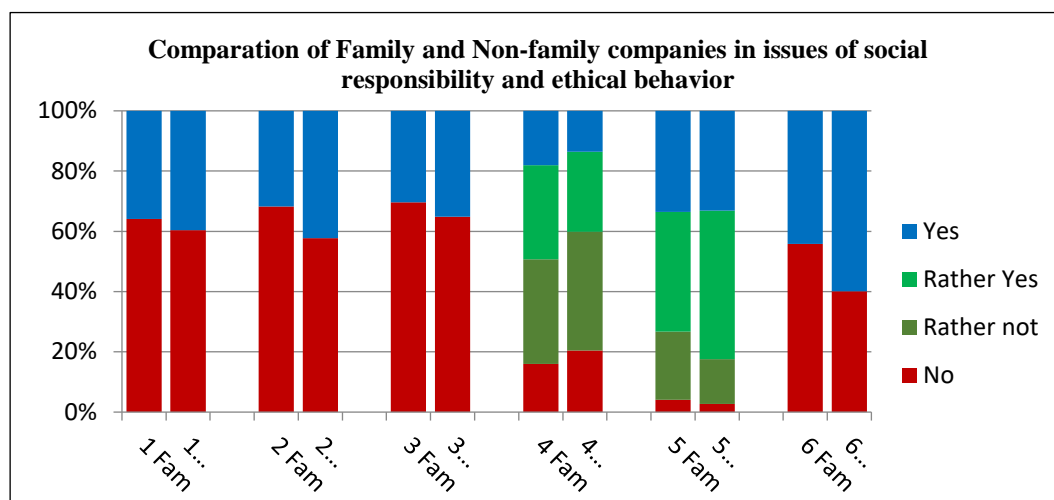
Table 3: Comparison of results – percentages and differences in percentages

Q. no.	Question	Type	Yes	Rather yes	Rather not	No
1	Has your firm defined a strategy of corporate social responsibility?	Fam	36%	0%	0%	64%
		Nonfam	40%	0%	0%	60%
		Δ	-4%	0%	0%	4%
2	Have you established an ethical code?	Fam	32%	0%	0%	68%
		Nonfam	42%	0%	0%	58%
		Δ	-11%	0%	0%	11%
3	Do you inform about your CSR activities?	Fam	30%	0%	0%	70%
		Nonfam	35%	0%	0%	65%
		Δ	-5%	0%	0%	5%
4	Are your employees regularly and systematically informed about the performance of socially beneficial goals?	Fam	18%	31%	35%	16%
		Nonfam	14%	27%	39%	20%
		Δ	4%	5%	-5%	-4%
5	Do you support your employees in the development of skills and long-term development?	Fam	34%	40%	23%	4%
		Nonfam	33%	49%	15%	3%
		Δ	0%	-10%	8%	1%
6	Have you established an environmental strategy/ policy?	Fam	44%	0%	0%	56%
		Nonfam	60%	0%	0%	40%
		Δ	-16%	0%	0%	16%

Source: own elaboration

2.1.1 Graf representation

The graphic overview divides individual questions into two columns where the first column shows family firms and the second column shows nonfamily firms in relation to the types of answers. The types of answers re given on the right and they are: yes, rather yes, rather not and no.

Figure 1: Comparison of Family and Non-family companies in issues of social responsibility and ethical behavior

Source: own elaboration 2019

3. Problem Solution

The respondents used the option to express their views on CSR and the business ethics in an on-line consultation. The consultation took place in the form of a questionnaire survey in the middle of 2019. 148 family firms and 150 nonfamily firms took part in the survey. The outputs from this consultation have already been analysed and may be considered during preparing the plan for corporate social responsibility in the Czech Republic.

The survey has shown that family firms have a clearly defined strategy of corporate social responsibility in 36% (yes) and have no such strategy in 64% (no). Nonfamily firms have produced similar results with a deviation of -4%, namely 40% deals in CSR and 60% have no CSR strategy at all.

As far as the ethical code is concerned, 32% of family firms have a positive attitude to this issue (yes) and 68% of family firms does not concern themselves with the ethical code at all. The difference in comparison with nonfamily firms is 11%, which means that nonfamily firms concern themselves with an ethical code in 42% and 58% of these firms do not concern themselves with ethics at all.

As to informing about their CSR activities, family firms have answered that they do in 30% (yes) and that they do not in 70% (no). Nonfamily firms provide such information in 35% of the firms while 65% of these firms do not do so.

As to whether the employees are systematically informed about the performance of socially beneficial goals, only 18% of family firms answered clear yes, while 16% of the family firms do not concern themselves at all with this issue. 14% of the nonfamily firms deal with the issue, while 20% of these firms are not concerned with this at all, the rest of the answers is divided between rather yes and rather not.

Another key question was whether the firms support their employees in the development of skills and in the long-term development, in which case the family firms stated clear yes in 34%, rather yes in 40%, rather not in 23% and no at all in 4%. The distribution of the answers among nonfamily firms was 33% yes, 49% rather yes, 15% rather not and only 3% no.

The last one of the survey questions concerned established environmental strategy and policy in firms and 44% of family firms answered yes, while 56% of family firms answered no. Nonfamily firms stated yes in 60% and no in 40%.

4. Conclusion

Given the fact that CSR and the ethics are at an increasing level depicted in media, at conferences, by the European Union, at seminars, by firms themselves, the results are quite startling. The highest proportional difference surprised me in the first question: only 36% of family firms and four per cent more, i.e. only 40% of nonfamily firms, have a defined strategy of corporate social responsibility. The ethical code is set up only in 32% of family firms and in 42% of nonfamily firms. With these questions the firms gave clear answers, that is, either unequivocal yes or unequivocal no.

Therefore, if enterprises participate actively in social responsibility activities and control the disclosure and dissemination of CSR information effectively, they not only provide the necessary relevant information for maintaining corporate image, but also receive the recognition and support from the public, improve their corporate reputation. Corporate reputation has a direct impact on consumers' buying intentions. As a signal of displaying its

own products or services externally, reputation is particularly attractive to stakeholders, especially to high-quality stakeholders. (Web of science[online], 2018)

According to CSR research, collaboration and partnership with SME suppliers, rather than imposition of explicit CSR communication requirements, would be advisable for those genuinely wishing to enhance supply chain responsibility.

How many of these firms will survive for the future? How large profits will they generate? Without ethical codes, without corporate responsibility these firms are in danger and will they be competitive? The time and an economic recession, when it comes, will show.

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Competitiveness Convergence of the Selected Central European Countries and China in New Millennium

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Abstract

Competitiveness of the economies is the subject of ever deeper research and belongs to one of the main objectives of the European Union. The aim of this paper is to ascertain, based on the method of distance, how convergence of selected economies of Central Europe – the Czech Republic, Austria, Poland and Germany and the big player at international market, China – occurs in this area. To achieve this aim, four measurable competitiveness indicators (degree of openness, export performance, transformation performance and degree of specialization) were developed and compared between years 2001 and 2017. It was assumed that although these countries are economies of different size and level of living standard, there was a gradual convergence of competitiveness during the monitored years. Using the above-mentioned method, this assumption was confirmed only in the case of export performance.

Keywords: Central European countries, China, measurable indicators of competitiveness, method of distance

JEL Classification: F14, O11, P52

1. Introduction

Competitiveness as a criterion for assessing the success of companies, regions and states is today regarded as a basic indicator of the degree of economic development of market economies (Kněžáčková and Sixta, 2018). Competitiveness can therefore be analysed at three levels. The first is the micro-level, where the firms on the basis of price and non-price factors (static level) and innovative activities (dynamic level) are evaluated. In this case, competitiveness itself can be defined as the ability to best meet given objectives (Slaný et al., 2006). The second level is the mezzo-level, which is characterized by the ability of the regional economy to optimize its internal resources in order to compete and prosper on both the national and global markets and to adapt to the changes in these two markets. The geographical (regional) and sectoral (cluster) aspects are distinguished. The last level is the macro-level, which is focused on the national or international concept of competitiveness.

The key issue is the broad concept of macroeconomic competitiveness: should we see it as an ability to improve the domestic business environment and thus the macro environment and the

position of the economy in the world economy? Or can be competitiveness expressed by the openness of the economy and the ability to continually improve its performance balance? Can we conceive such competitiveness as an effort for innovative productivity growth? It can be said that the macroeconomic definition positively reflects all of the above-mentioned issues. Another problem arises, how to measure such an already defined problem. Macro-level competitiveness can be measured by two types of indicators, both measurable, quantitative, which include input (cost) and output (measure results) and non-measurable, qualitative. The whole process of measurement is reflected in the results of international comparison of the economies, and therefore we can speak about international competitiveness in this context.

Competitiveness belongs to one of the main objectives of the European Union and China, and convergence can be viewed as an opportunity for its growth. As claims Balcarová (2016), converging competitiveness among EU member states is a necessary precondition for the competitiveness growth of the EU as a whole. According to Dollar and Wolff (1993), all the OECD members had sufficient savings rates, outward orientation and educational base to form “convergence club” after the War II. Only when the competitiveness of economies tends to be converged, can innovation be most effectively realized and made the best use of it (Xiatianen, 2018).

The aim of this paper is to ascertain, how convergence of selected Central European economies – the Czech Republic, Austria, Poland and Germany, and the biggest economy in the world – China, occurs in this area. To achieve this aim, four measurable competitiveness indicators (degree of openness, export performance, transformation performance and degree of specialization) were developed and compared in period of 2001 and 2017. It was assumed that although these countries are economies of different size and level of living standard, there was a gradual convergence of competitiveness during the monitored years.

In order to ascertain the position of economies in the area of measurable competitiveness indicators, a method of distance will be used and the difference between the aforementioned indicators will be expressed as a percentage. The Czech economy is set as the basis and the distances of the selected countries and their development will be graphically displayed.

Structure of the paper is following: The second part explains how competitiveness indicators have been created, in the third part the analysis of the distance in the monitored period will be performed and in the fourth part the results will be summarized and the presumption will be confirmed or rejected.

2. Problem Formulation and Methodology

According to Halásková et al. (2016), competitiveness can be, in broader context, understood as a set of prerequisites for reaching a sustainable long-term growth, resulting in an increasing economic level against the backdrop of internal and external balance. The Bulletin of the Bank of England (1982) states that competitiveness should be measured in terms of relative export prices, relative export productivity and relative unit labour costs. Cas (1988) adds that competitiveness and change in competitiveness is linked to export performance, because if a country loses its share of exports (in a particular item or sector) or gains increased import penetration (in a particular commodity or sector), it becomes less competitive (Rugman and D'Cruz, 1989). Similarly, Fojtíková (2009) claims that export performance, but also the degree of openness, are the basic indicators of foreign trade as the essence of international competitiveness.

Taking into account the above approaches, the first type of measurable output indicators was chosen:

- the degree of openness of the economy
- export performance of the economy
- intensity and structure of specialization through a relative specialization indicator
- added value of export through transformation effect.

The necessary data were downloaded from the databases of Eurostat (2019) and UNCTAD (2019).

The choice of compared countries was not random – small-sized economies (Czech Republic and Austria), middle-sized economies (Germany and Poland) and the big/gest one (China) were investigated. The last one was chosen according to idea of Adams et al. (2006) that this country has been highly successful in capturing world export markets. Chinese competitiveness is not just a matter of an undervalued exchange rate and extremely low labour costs; it reflects the coincidence of favourable cost conditions with improvements in China's ability to produce products that meet world market specifications. The comparison of these countries so seems to be very interesting in the case of convergence of measurable competitiveness indicators.

2.1 Model and Data

The degree of openness is the basic indicator of the intensity of foreign trade (Majerová, 2014). It shows the degree of connection of the national economy to the world economy. The basis is always the indicator of the created product, which can be compared to export (Guitierrez, 2006), to import or to the foreign trade turnover (Squalli and Wilson, 2011). Given that the import indicator in macroeconomic theory is dependent on the produced product, its inclusion into the indicator of the degree of openness, according to our opinion, cannot be considered as appropriate. Therefore, for the purposes of determining competitiveness in the denominator of the relative indicator, only exports will be used, as shown in equation (1).

$$OE = \frac{VEX}{GDP} * 100, \quad (1)$$

where OE is the degree of openness of the economy, the VEX is value of exports of goods and services and the GDP is the gross domestic product.

A more conclusive indicator for measuring competitiveness than the degree of openness is its productivity of foreign trade. This is expressed through the indicator of export performance of the economy. As Fagerberg (2002) claims, export performance expresses a country's ability to adapt its export structure to changes in world trade patterns. It is measured through various indicators, from the share of exports in global exports (Priede and Pereira, 2015), through the trade balance (Llatja, 2015) to the share of exports in imports (Zhelev and Tzanov, 2012) or the share of exports per capita (Majerová, 2014).

In this case, export performance will be calculated by the volume of exports per capita. Since this is an indicator of productivity, the population is expressed by its productive part, ie. population in productive age (equation (2)).

$$PE = \frac{HEX}{NPC}, \quad (2)$$

where NPC is the productive population of country.

Not only the amount of exports, but also its structure is important. For the highest competitiveness of economy, its exports must include high-tech products, which are compared to all export production. As Chaudhuri and Ray (1997) argue, technological innovations are major contributors to national competitiveness. Therefore, the indicator of relative strength of specialization was used, characterizing the relative advantage or disadvantage in trade for a specific product (or product group) in a group of countries, as shown in equation (3). High-tech products were selected for X technologically demanding products, including pharmaceuticals, communication technology, computer technology, medical devices, aircraft, etc.

$$CS = \frac{\frac{x_{ij}}{\sum_i x_{ij}}}{\frac{x_i}{\sum_i \sum_j x_{ij}}}, \quad (3)$$

where X_{ij} is export of j-th commodity or group of commodities from i-th economy, $\sum_i X_{ij}$ is sum of world exports of j-th commodity or group of commodities, X_i is export of commodity group of i-th economy and $\sum_i \sum_j X_{ij}$ is total world export of manufacturing industry.

Although the intensity or productivity and structure of exports are important, the analysis of its effectiveness cannot be also omitted. This efficiency is expressed through the transformation performance indicator, which means the added value of imports and reflects its ability and appreciation rate. This indicator is expressed by the difference between exports of manufacturing products and imports of primary production per capita, see equation (4).

$$TP = \frac{MEX - PIM}{NP}, \quad (4)$$

where MEX is export of manufactured products (SITC 5-8) and PIM represents the import of primary production, NP is number of citizens.

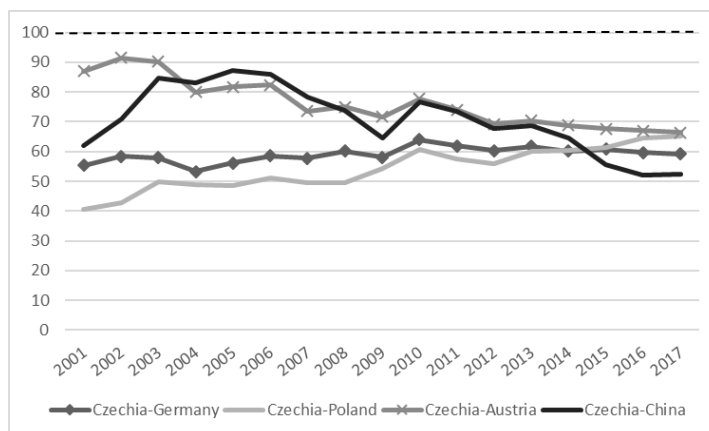
The data of above-mentioned indicators are shown in the Appendix. The best results of the indicators in the monitored period are marked in grey colour and indicate that the Czech Republic is one of the economies not only with a big progress, but also country with the best results in terms of measuring competitiveness in general.

3. Problem Solution

To determine the position of economies in the area of measurable competitiveness indicators, the method of distance will be used and the differences among the indicators of the compared countries will be expressed as a percentage. The Czech economy is used as the basis (100 percent) and the distances of the countries and their development are shown by selected indicators in the following figures.

Figure 1 shows the distance between the indicator of the degree of openness. The following figure shows that Austria's openness declined over time, similar in the case of China (its openness turned back to the value at the beginning of monitored period). Poland reduced its distance, and gradually approached the level of Germany. Any of the compared economies has not achieved the degree of openness of the Czech economy.

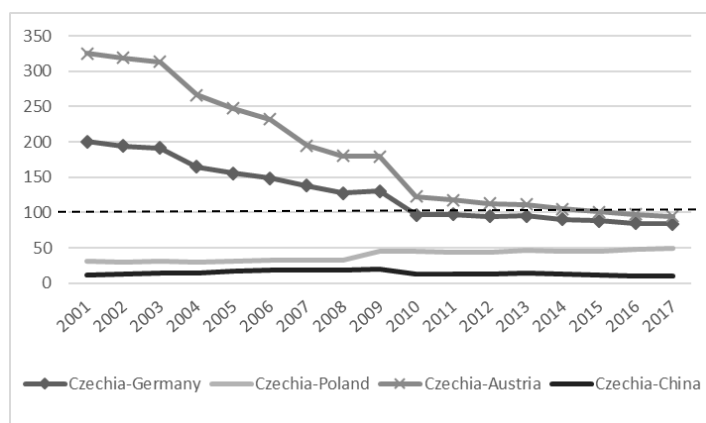
Figure 1: The Distance of the Indicator of Degree of Openness among the Monitored Countries and the Czech Economy



Source: own elaboration (2020)

As shown in Figure 2, in the case of the export performance indicator, Germany and Austria reached a high export performance distance from the Czech Republic – Germany over 200 percent and Austria even over one hundred percent at the beginning. Over the time, this distance has decreased both in the case of Poland (although only slightly), and more significantly in the case of Germany and very sharply in the case of Austria. The Chinese distance was mostly the same all the time.

Figure 2: The Distance of the Indicator of Export Performance among the Monitored Countries and the Czech Economy

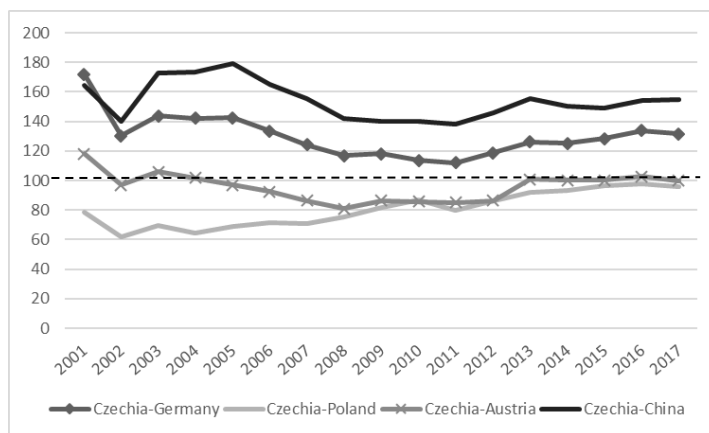


Source: own elaboration (2020)

From the point of view of the structure of exports, and thus exports of high-tech production, the distance between economies and the Czech economy was about mutual convergence (see Figure 3). While Germany had almost 80% higher exports of technologically demanding production (compared to the Czech Republic), China 60% and Austria 20% at the beginning of the monitored period, the Polish economy showed a negative 20% gap. In the case of Poland, there has been a catching-up effect over the years and has almost reached the level of the Czech economy. Thus, Austria was caught up by the Czech Republic and it reduced its distance from

Germany to thirty percent (in 2011, the difference was only 11%). Germany and China, they have slightly increased their distance since 2013.

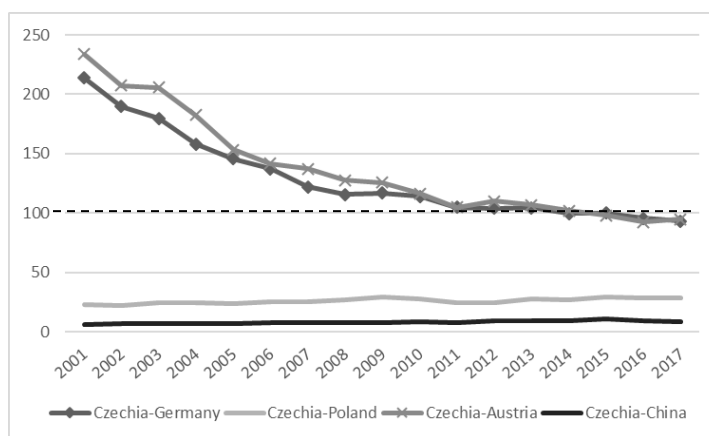
Figure 3: The Distance of the Indicator of Degree of Specialization among the Monitored Countries and the Czech Economy



Source: own elaboration (2020)

The situation was different in the case of export efficiency, ie. transformation performance. Poland's and China's distances remained almost unchanged, as shown in Figure 4. Germany and Austria showed a sharp decline, indicating a very successful catching up effect of the Czech economy (2015 to 2017). Taking into account that the distance at the beginning of the reporting period was more than 200 percent in the case of these two countries, the success of the Czech economy was indeed essential.

Figure 4: The Distance of the Indicator of Transformation Performance among the Monitored Countries and the Czech Economy



Source: own elaboration (2020)

According to obtained results, the most successful convergence was achieved in the case of productivity of export, the lowest one in the field of openness, where the distance among Czechia and the rest of monitored countries increased.

4. Conclusion

The aim of this paper was to investigate, how successful is convergence of selected economies of Central Europe – the Czech Republic, Austria, Poland and Germany, and the biggest country in the world – China, in the area of international competitiveness. Four measurable competitiveness indicators were developed and compared between years 2001 and 2017. It was assumed that although these countries are economies with different size and level of living standard, there was a gradual convergence of competitiveness during the monitored years.

Based on the results of the above analysis, it is possible to compare the positions of the selected economies in individual competitiveness indicators and thus determine their position within the group. However, it should be noted that the comparison results are influenced by the choice of measurable indicators. In the case of the degree of openness, convergence was occurred among bigger economies but in the relationship to the Czech Republic it showed a divergence; the most open country, Czech Republic, increased its openness and Poland has achieved the greatest progress. On the other hand, Austria and China decreased the value of this indicator. The highest convergence was achieved within the indicator of export performance, with exception of China that did not changed its position. A similar result is shown by specialization, where the best values were achieved by China and Germany, Poland remained at the top of the progress. In the case of transformation performance convergence was occurred in three of four monitored economies, unfortunately Poland and China lagged behind in the results.

In general, both in terms of competitiveness and convergence, there had been a positive trend in the monitored economies in new millennium. According to this, in our future research, we would like to further continue this initial analysis of the issue of convergence using beta convergence regression econometric models.

Acknowledgements

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Appendix

	Openness of Economy					Performance of Export				
	CZ	GE	PL	AT	CH	CZ	GE	PL	AT	CH
2001	62.2	34.4	25.2	54.1	38.5	3951	7914	1257	12850	461
2002	60.4	35.3	25.8	55.2	42.8	4451	8649	1338	14200	581
2003	61.1	35.4	30.4	55.1	51.8	5471	10472	1723	17136	815
2004	71.6	38.1	34.9	57.3	59.5	7686	12681	2315	20457	1146
2005	71.4	40.1	34.7	58.3	62.2	8716	13556	2766	21537	1511
2006	75	43.9	38.3	61.8	64.5	10480	15544	3433	24305	1960
2007	79.6	46	39.4	58.6	62.2	13466	18617	4394	26277	2496
2008	78	46.9	38.5	58.5	57.6	16202	20724	5344	29241	2932
2009	69.9	40.6	37.9	50.1	45.2	12667	16540	5801	22738	2460
2010	66.0	42.3	40.0	51.3	50.7	25940	25119	11692	31794	3225
2011	69.2	42.8	39.8	51.2	50.7	28654	27906	12630	33656	3854
2012	71.4	43.1	39.9	49.5	48.3	30204	28651	13269	34127	4128
2013	68.2	42.1	40.9	48.0	46.7	30607	29083	14153	34037	4407
2014	69.9	42.1	42.1	48.1	45.1	33581	30381	15202	35224	4606
2015	71.3	43.3	43.7	48.2	39.6	35764	31583	16421	36047	4385
2016	71.6	42.8	46.1	47.9	37.3	37536	31964	18131	36593	3940
2017	72.8	43.1	47.5	48.4	38.2	40051	33796	20084	37873	4129
	Coefficient of Specialization					Transformation Performance				
	CZ	GE	PL	AT	CH	CZ	GE	PL	AT	CH
2001	0.48	0.82	0.37	0.56	0.78	2485.2	5315.8	574.8	5807.6	155.8
2002	0.61	0.80	0.38	0.59	0.86	3071.7	5827.9	690.2	6373.7	204.9
2003	0.55	0.79	0.38	0.58	0.95	3779.7	6793.5	924.2	7771.7	261.7
2004	0.58	0.82	0.37	0.59	1.00	5181.9	8183.7	1270.2	9467.3	342.2
2005	0.57	0.82	0.40	0.56	1.03	6048.1	8812.2	1450.9	9259.2	437.9
2006	0.61	0.81	0.43	0.56	1.00	7169.5	9826.7	1823.7	10159.0	554.8
2007	0.65	0.81	0.46	0.56	1.01	9437.4	11526.9	2360.0	12971.5	698.6
2008	0.70	0.81	0.52	0.57	0.99	10522.5	12153.0	2808.4	13417.1	765.1
2009	0.69	0.82	0.57	0.60	0.97	8219.3	9601.7	2384.3	10311.2	658.6
2010	0.70	0.79	0.61	0.60	0.98	9426.9	10761.9	2628.0	10979.7	820.3
2011	0.70	0.79	0.56	0.60	0.97	11823.3	12377.1	2934.4	12376.8	919.7
2012	0.67	0.79	0.58	0.58	0.98	11306.4	11782.3	2727.9	12453.3	1016.8
2013	0.63	0.80	0.58	0.64	0.98	11894.1	12410.1	3308.0	12693.8	1112.2
2014	0.64	0.80	0.60	0.64	0.96	13202.4	13144.2	3587.2	13441.2	1210.6
2015	0.63	0.80	0.60	0.63	0.93	12117.2	12140.6	3506.4	11877.2	1288.4
2016	0.60	0.81	0.59	0.62	0.93	12955.1	12398.7	3701.0	11961.5	1172.8
2017	0.61	0.81	0.59	0.61	0.95	14242.9	13271.5	4062.5	13491.7	1186.4

Source: UNCTAD (2019)

Will we See an Economic Boom in the European Union and the Euro Area in the Coming Years?

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Abstract

In 2020/21, we can see an unsustainable increase in public debt, populist revolt, interest rate hikes, liquidity cuts, monetary tightening, or a gradual opening of the European debate on how to deal with the new crisis. The EU problem is built on the same footing and with increasing debt, the demise of genuine democracy at the nation-state level is approaching. The notion that monetary policy, even with unconventional instruments such as quantitative easing, will pull the euro area out of the problem has proved fatally wrong. The euro area is not a complete economic and monetary union, and fundamental weaknesses remain. Beyond 2019, the slowdown in world economic growth is due to increasing trade barriers, increased geopolitical uncertainty and structural factors such as low productivity growth and ageing populations in developed countries. I am convinced that the EU, and thus EA, may actually be worried about the impending financial and economic crisis and I don't see an economic boom in the coming years.

Keywords: *Economic growth, European Area, European Union, monetary policy, monetary union, public debt*

JEL Classification: *E52, E66, F39, O52, P51*

1. Introduction

The world is going into a period of the greatest global transformations during the last few centuries. The contemporary world and the EU - EA (Euro area) is complicated because too many unknown economic and political factors exist there, for example, monetary policy, buy and hold strategy, negative interest rates, Forex regulation, subsidies (difficult access to EU subsidies for small and medium enterprises - SMEs), or the ECB and the EU CB state activities, a political situation (e.g. migration, security, climate, trade wars (US-China-EU) tensions in the Middle East, Coronavirus - that will affect not only China but the whole global economy, etc.) global banking operations, or the Basel III, the shocking banking operations, the revolution that nobody noticed it and those who created gold reserves, will be calm (USA, Russia, China, Germany, etc.).

The global political panic recorded and showed in 2019 that the world is unable to escape from its own addiction to printing money. Support for central banks is so important for economies that the status will remain valid until effect until the complete structural failure. The infinite quantitative easing (QE) has its consequences and we can see it especially in China and also in the EA. For example, the ECB threatens the system by rescuing by saving bankrupt states – which violated directives, rules and contracts The Stability and Growth Pact has failed, the market discipline is gone due to ECB interventions, so the market or policy mechanism has disappeared from the market or policy. It turned out because of world trading slowing growth the uncertainties persist longer than expected, which has a clear impact on EA. There are

chances of a more structural nature at the same time. We are starting to look at the global shift - especially from emerging markets - from external demand to domestic demand, from investment to consumption and from production to services (ECB, Economic Bulletin, 2017). Only strong domestic demand has contributed to the recovery at EA.

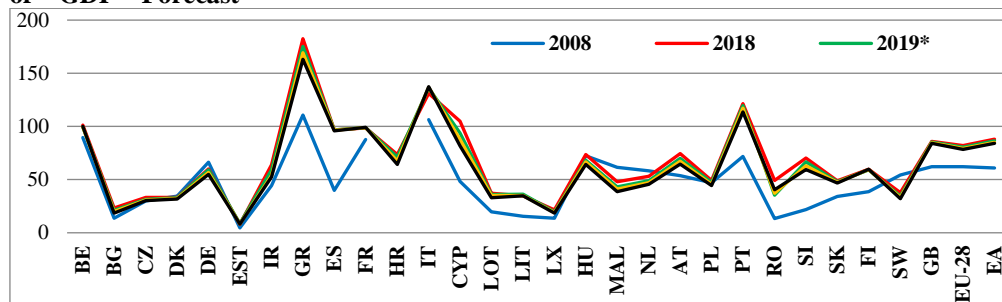
The idea, that monetary policy, even with unconventional tools like QE, will pull the EA out of the problem, turned out fatally wrong. EA is not completed economic and monetary union, fundamental shortcomings remain. Without a strong budget, it means at best a poor growth at best, no prosperity, at worst. The price for maintaining the single currency on a restrictive basis (using the Fiscal Compact and fiscal (in) discipline) necessarily means that it creates its own peripherals. It is impossible to have a monetary union with common money in a situation where you have 19 fiscal policies, 19 national budgets and one common monetary policy. If we want an effective monetary union, we must have a common budget.

It appears that the group of surplus countries tends to grow faster than the world economy in a period of global rise, but also decreases sharply in a period of global decline. The opposite is true for the group of deficit countries (ECB guide to internal models: 2019). When global growth declines, stronger internal demand can also help protect jobs. This is because domestic demand is more related to labor intensive services, while external demand is more related to production, less labor intensive (Anderton, R., Aranki, T., Bonthuis, B. and Jarvis, V.:2014). We can see this shield in action at EA today, and the resilience of services is a key reason why employment has not yet been affected by a global slowdown in production (Lane, Philip: 2019).

However, the second advantage is also the strengthening of the domestic economy by facilitating balancing. More dynamic internal growth offers a way to improve EA's functioning and accelerate recovery from the crisis. One of the key elements here is EA's fiscal policy, which concerns not only the aggregate position of public expenditure but also its composition. Investments are a particularly important part of responding to today's challenges, as it is today's demand and tomorrow's supply. Public investment remains somewhat below pre-crisis levels in EA. The share of productive expenditure in total primary expenditure - which includes R&D and education in addition to infrastructure - has also declined in almost all euro area economies since the crisis (European Fiscal Board: 2019). And there are new investment needs. For example, the completion of the digital single market, the union of the capital markets and the single market for services can provide the impetus that the EU needs to set up new and innovative companies and to rapidly spread new technologies across the Union. These are the building blocks of Europe's future economy. The expected profits are significant: new studies will find that full implementation of the Services Directive would lead to profits of the order of €380 billion (Pelkmans, Jacques.: 2019), while the completion of the digital single market would yield annual benefits of more than €170 billion (Scott Marcus, J., Petropoulos, G. and Yeung, T.:2019).

2. Some Macroeconomic Impact indicators

QE policy helps to keep the consumer mood at a favorable level as it is a boost to stock exchanges. For example, in the US, where key stock market indicators are close to their historic high, equity growth is a key source of good consumer sentiment. In the US they have a substantial part of their wealth in stocks. Consumer optimism drives a sphere of services that is not as dependent on the fluidity of the international trade industry.

Figure 1: The Short-term Fiscal Impact of the Crisis – General Government Debt in % of GDP – Forecast*

Sources: Gfmag, XI/2019, Eurostat, XI/2019

According to the IMF, the slowdown of world economic growth in 2019 is due, among other things, growing trade barriers, increased geopolitical uncertainty and structural factors such as low productivity growth and an ageing population in developed countries (Euro.cz [online] 2019). All these facts can become a disaster for monetary union. The EU problem is built on the same footing and, with increasing debt (Figure 1), the demise of real democracy at the nation-state level is approaching. Let's look at some of the macroeconomic data for both the EU and EA.

The indebtedness of EA climbed to approx. €250 bill. By the way, before the financial crisis debt represented only €175 bill. and has been issued €4 bill. EA bonds. Debt is increasing in all EU Member States and in EA (Gfmag, Eurostat [online] 2019). Some public debt data on GDP are of concern to me. In its most recent forecast, the IMF reduces the estimate of world economic growth in 2019 to 3.2%. This is the least since the global financial crisis ten years ago. Developed economies were expected to grow to 1.9% in 2019 and 1.7% in 2020 (M. Buti, IMF, J. Zumbun, J. Kearns [online] 2019). Growth in EA will accelerate by 2020, as external demand is expected to recover and temporary factors (including a decline in German car registrations and French street protests) will continue to disappear.

The EU economy grew strongly in 2019 by 1.4%, in EA by 1.2%, the EC states in its summer macroeconomic forecast (EC, European Economic Forecast [online] 2019). In 2020, the EC expects the economy to grow by 1.4% for the EU and 1.2% for EA. Again, the forecast highlights the dangers posed by external factors, such as tensions in international trade or uncertainties related to international policy. Growth was driven mainly by high investment and household consumption. However, external trade had a negative impact on GDP, as high domestic demand caused imports to rise above exports (WB-Databank, IMF Statistic Times [online] 2019).

The projected acceleration of growth in 2020/21 is uncertain; stabilization is currently expected in emerging markets and emerging economies and progress towards addressing trade policy gaps (J. Kearns, Bloomberg [online] 2019). The IMF predicts that in 2020 we do not expect a possible future financial crisis. Or will there really be no economic crisis in 2020/21? We see this from the following chart, which I took after the IMF was published.

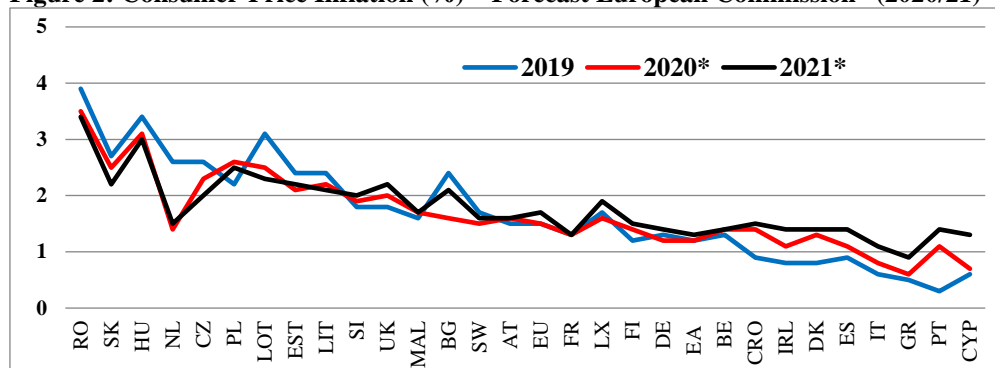
The risk factors of the EU and EA are not internal economic but especially external and are associated with a deteriorating geopolitical situation. The fact that some traditional partners for the EU are seeking to change the rules of international trade and investment play, that striving to intensify their global economic influence is reflected not only in success in equal competition but in barriers and obstacles to free trade and investment flows. Increased risk of trade and investment wars with resulting negative impacts on the EU economy and loss of its

own influence on the global economic order will be accompanied by a longer-term loss of EU positions and thus also EA in the global economy. The EU's share of world trade and investment has been steadily declining, which is reflected in the weakening role of EU leaders in various global institutions and organizations (WB, DataBank [online] 2019). It does not depend on GDP, in which both the EU and EA show growth in the world in 2018 and 2019. However, in 2019 - after several decades of easing and liberalizing the conditions of international trade and investment - it is harder than it would seem. At a time when there is a risk of further escalation of trade and investment wars, it appears that countries or their groupings, suitable or willing to conclude such agreements with the EU at present are not so much (the exception is Vietnam) Japan - as well as developed partners, do not compete with the EU.

There is a risk that the phenomenon of social and environmental dumping will be more accentuated in the context of agreements. In conditions of intensifying political correctness in Europe, it is difficult to imagine how both sides will interpret and interpret the problem of working activities being carried out by children under conditions that would not pass anywhere in Europe, or the impact of economic activities on the environment in their respective countries, also unacceptable from a European perspective.

Inflation problem in the EU: In 2019, inflation should rise to 2.4%, slightly above 2% of the central bank's target. In 2020, consumer price inflation will slow to 2.1%. According to the EC, GDP should grow in all EU countries in 2019, but for example in Central and Eastern Europe, Malta or Ireland, the expansion will be significantly higher than in Italy or Germany, where it should be only 0.5% and 1%. , 4% in 2020. In Italy, the EC expects economic growth of 0.1% in 2019 and 0.7% in 2020 (Eurostat, [online] 2019).

Figure 2: Consumer-Price Inflation (%) – Forecast European Commission* (2020/21)



Source: Eurostat, XI/2019, Jährliche Inflationsrate in EA und EU, Eurostat, EC I/2020

Five-year inflation is record low at 1.2% in EA. When the ECB launched QE in 2015, five-year expectations stood at 1.6%. EU inflation is 1.6% in 2019 and 1.3% in EA. With subdued growth in final demand, core inflation across advanced economies has softened or remained well below the target (for example in the USA) or remained well below it (EA, YPN).

In years of ongoing boom, it is often talked about when the economic crisis - recession - will come. The so-called flattening of US bond yield curves is considered one of the reliable indicators. This means that short-term and long-term bond yields continue to converge when bonds with shorter maturities begin to show higher returns than bonds with longer maturities. This also happened in 2007, which heralded the global financial crisis.

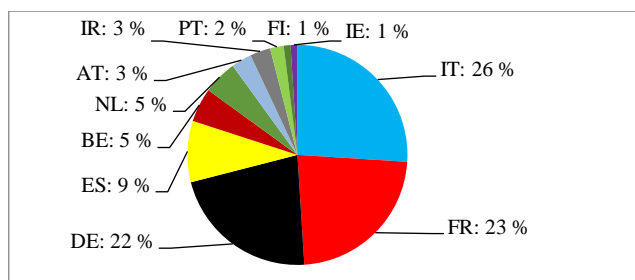
Table 1: Government Bonds Yields (2, 5 and 10-year bonds – February 7, 2020)

	NL	FL*	DE	FR	IT	PT	ES	SW	USA	YPN
2 y.	-0,627	-0,7	-0,645	-0,622	-0,215	-0,403	-0,460	-0,425	1,399	-0,134
5 y.	-0,579	-0,42	-0,607	-0,470	0,221	-0,099	-0,209	-0,356	1,403	-0,127
10 y.	-0,288	-0,18	-0,384	-0,135	0,942	0,266	0,282	0,040	1,590	-0,025

Source: *WSJ – Markets, 25/X/2019, Worldgovernmentsbonds.com II/2020, Investing.com II/2020

There has been a dramatic change in the global macroeconomic environment during the past six months in 2019. As a result, central banks, led by the US Fed and the European ECB, have failed to continue the monetary tightening they have begun. The gravitational power of cheap money addiction thus continues to pamper stock and bond markets and abrade the edges of some macro events. More on this site (CNBC, Bloomberg, Investing, Frank, Bond Market, Eurostat [online] 2019). As the bubble bursts, you will see how chaos metastasizes around the world. There is no prediction now. The impending collapse of bond markets is already underway. The bursting of bond bubbles will attract real estate prices, stock market values and release the currency chaos. Unfortunately, there is a global depression that we have never seen before because there has never been so much debt at the top of artificially squeezed interest rates. Central banks always cause a recession. We're headed for a global depression. The question is what he will do with the central banks this time. It first starts with "deflation" and then moves into "prudent inflation". (M.G. Pento, 2018, F. Margan, 2019).

The European debt crisis probably reflects the risk of re-denominations in EA, with many investors preferring to hold German bonds. However, recent developments after the crisis also point to the loss of the long-term US bond (Table 1). This means that a change in the relative supply of longer-term German debt will lead to an increase in German bond yields, which is more pronounced at longer maturities. Especially of German bonds vis-à-vis other government bonds increased after the global financial crisis (A.C. Paret, A. Weber, 2019). In the future, we expect the supply of German government debt to remain scarce, which has important implications for the ECB's monetary policy strategy. For a better understanding of bond policy, I propose to read this topic by the following authors (Grandia, Hänling, Russo, Åberg, 2019, Krishnamurthy, Vissing-Jorgensen, 2011). Investors expect despite more than €8 bill. In the case of negative euro bonds with negative euro interest rate bonds, the required bond yield was further reduced. I expect the German 10-year government bond to return -1% in 2020. I assume that by the end of 2020 the ECB will have to buy bonds of approx. €400 billion. In particular, it is interesting to note that there is no clear link between the range of bid requests and bond market shares (D. Baaur, B. Lucey: 2019), another possible liquidity indicator. Thus, the Italian government bond market, the largest in EA, has often experienced some of the largest spreads between demand and demand among non-peripheral countries, while Finland, the smallest market in our sample, does not show particularly adverse dynamics.

Figure 3: Average Sovereign Bond Market Shares in the Euro Area (2000-2018)

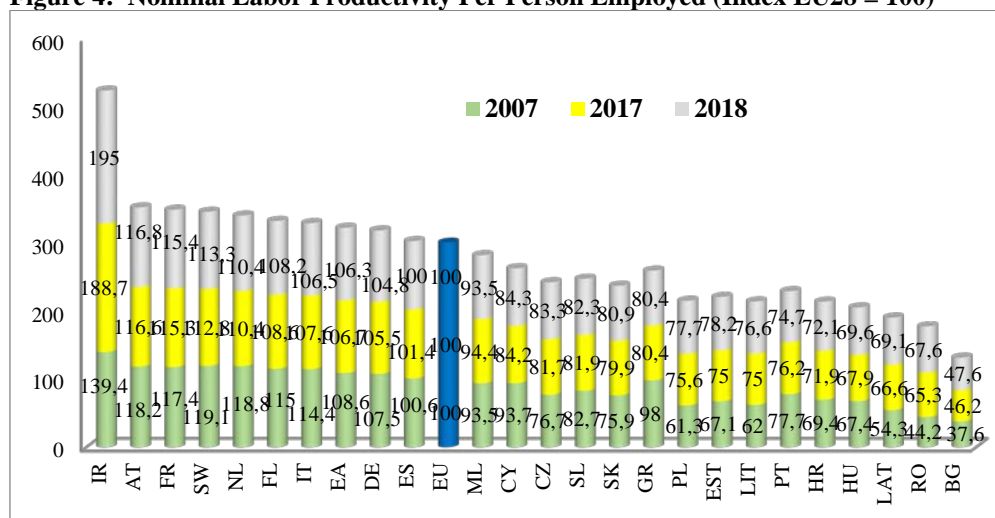
Sources: Eurostat, 2019, authors' calculations

Flight to safety is usually identified as a negative common price movement between different categories of assets (usually stocks and bond yields) in periods of financial stress (eg. when the stock market is falling), although the concept can also be applied to securities with different levels of perceived risk in the same asset class. Resilient domestic demand contrasts with the shortcomings of global trade. Therefore, EA continues a recent trend that combines a resilient service industry with difficult manufacturing industries (A. Boersch, Deloitte [online] 2019). Strengthening private investment should gradually add to improving domestic and foreign demand (F. Margan, Virt, 2015).

The overall weakness in production is influenced mainly by production-intensive economies of Germany and Italy. Industrial production in Germany and Italy tends to decline significantly in (2019). Industrial production in France and Spain also did not grow too much but showed a slightly positive trend over the same period. While the industry in EA is plummeting, the service sector is still doing quite well. It is precisely these qualities that are now being set up by individual economies that play a vital role in ensuring that the world economy is not losing its breath even more alertly.

Interesting is: individual productivity and cost growth. Productivity is a fundamental driver that has led to the depletion of employment potential in agriculture, industry, services and the public sector. If wages in Central and Eastern Europe increased faster than productivity, the region would lose a lot foreign investment, which has been the engine of the Central European economy for 20 years. Consequently, it is productivity that also leads to de-globalization and integration of sectors in the era of re-localization. Re-localization is therefore based on high productivity of local production (without unnecessary costs and productivity reducing the burden of global logistics), based on highly productive technologies and modern global knowledge. Graph 4 shows the evolution of labor productivity in EA and EU-28. The combination of GDP and employment data makes it possible to estimate labor productivity. The growth analysis compared to the same quarter last year shows that productivity growth (based on employed persons) fluctuated around 1% between 2013 and 2018 in both zones. After a decline, productivity growth was stable in 2019 for EA and slightly positive for EU-28 (ec. Europa.eu/eurostat [online] 2019).

Figure 4: Nominal Labor Productivity Per Person Employed (Index EU28 = 100)



Source: Eurostat, X/2019

Modern technology, such as additive manufacturing, modularity, 3D printing, vertical farms, self-assembly, is highly productive and flexible in a modern, localized sense. The era of stagnating or declining “Chinese” productivity of large batches, mass scale and mass production of identical products has already subsided.

A high share of industrial production in GDP is represented in Central and Eastern Europe with a very low share of high value-added activities requiring a high level of qualification. Especially in the field of science and research, but also in the field of law, accounting and financial services, management, architecture, engineering and other technical or analytical fields. Overall, this whole segment in 2018 accounted for only 6.9 % of the GDP of the Czech economy (still too dependent on industrial production). On the other hand, the share of activities with high added value is relatively low, actually one of the lowest in the EU. Throughout the EU, only Bulgaria and Greece have already recorded a lower share of the item. The EU average as a whole was 11.5% (Eurostat, 2019). However, if the region is to manage the transition to a new technology transition, it must change its education system, which must be able to better prepare students for new jobs (such as the 4th Technological Revolution), a change that is likely to take some time (A. Strohlein, 2018, B.lists, Twitter, Eurostat [online] 2019). But if wages in Central and Eastern Europe have risen faster (as is already happening) than productivity, the region would have lost foreign investment, which has been the engine of the CEE economy for 20 years.

3. Some Economic Considerations Concerning the Dependence of the Situation Relations Between Eastern - Central Europe, EA and EU

Fifteen years after joining the EU, the four "Visegrad" states of Central Europe (V-4) can be more severe from their economic successes than from their fragmented records of political reform. The Czech Republic, Hungary, Poland and Slovakia have dramatically increased GDP per capita and are converging with their powerful neighbour Germany. The Czechs are the richest, with GDP per capita of 71.1% of Germany, followed by Slovakia with 66.5% and Hungary and Poland with about 57% (Europa Parliament, XI/2019) - and the gap is still closing because of their growth that surpasses Germany (The Economist, Financial Times [online] 2019).

The economies of Central and Eastern Europe have been experiencing strong growth for years, supported by low-interest rates, rising spending and recovery in EA. However, Germany, which is the main trading partner for most, has begun to slip slowly into recession with fears of the end of golden times in Central and Eligible Europe (The Economist, Financial Times [online] 2019). The interconnection of Central and Eastern European economies with Germany was one of the key factors for the region's rapid growth in the last three decades. German automakers, retailers, banks and manufacturers have attracted inexpensive skilled labor. In large numbers, they therefore penetrated the region, setting up thousands of factories and offices, and helped local enterprises to fulfil orders (Financial Times [online] 2019). I expect high unemployment in the automotive industry in 2020/21, which will cause economic shock in the V-4 countries and Eastern Europe. The problem is that politicians are not prepared for the future economic shock (they increase - minimum wages of state administration, social benefits, uneconomic increase of salaries in the state administration, spend on unproductive investments and do not think of savings, etc.)

Given the rising costs of social policy, wages, health services in Central and Eastern Europe, where they are growing very fast, on the one hand, technological progress, stagnation in the automotive industry and low productivity may, in the near future, mean decline competitiveness on the international market. Not to mention the dysfunctional use of EU

grants-subsidies in recent years and have invested heavily in administrative buildings of municipalities, hotels, golf courses, some dysfunctional industrial zones, large agricultural and energy companies, etc. Legal system, expatriates, this will be an important issue for the future of EU funding for V4 countries and Eastern Europe.

I agree that the increased resilience and functionality of EA is closely related to the activities leading to the completion of BU and the Capital Markets Union in reducing the riskiness of the environment in the banking and wider financial sector (P. Zahradník, *EU News Monthly Journal*, 2019/192). From a fiscal responsibility perspective, it is essential to find a very fragile and thin balance between the efforts of highly indebted countries to reduce the debt ratio and build up their fiscal reserve on the one hand, and the ability to use the fiscal space for investment. Risk reduction in the banking sector and, more generally, in the financial intermediation sector, is an important contribution to the stable functioning of EA and the EU economy as a whole.

The question is which countries are the driving force of the EU? France and Germany! Only these two countries can carry out reforms in the EU because the United Kingdom left the EU and no longer has the influence. In the past, there were large differences between Germany and France regarding economic and political reforms in EA, as in the EU. This is no longer the case and together they are launching an urgent reform initiative in the EU also in EA. The aim is "united and more independent" EU and EA. Together they will pursue and achieve the goal of making European economies white strong and capable of meeting the current global challenges (Handelsblat, 2019).

Agree that the economic outlook depends on structural developments, in particular on digital transformation, energy transition and global and European competitiveness. They underline the importance of a strong and sustainable economic, technological and industrial base in Europe. This requires a better functioning internal market (especially in its digital dimension), up-to-date regulation (without unnecessary barriers, taking into account the new framework of international competition and the market power of digital platforms), an EU budget that fosters innovation and investment; convergence and competitiveness in EA and to strengthen bilateral economic policy.

4. Conclusion

In 2020/21, we can see an unsustainable increase in public debt, populist revolt, interest rate hikes, liquidity cuts, monetary tightening, or a gradual opening of the European debate on how to deal with the new crisis. The EU is currently inflexible in many respects, and a lot of things are very incomprehensible because of its different instruments and quotas. The EC is not able to respond adequately to unexpected events, it does not undertake an urgent economic and legal reform, as evidenced by the reaction to Brexit, which did not lead to EU self-reflection. The ECB should raise interest rates because, with record low-interest rates and large bond purchases, it is just trying to support economic growth and hence inflation.

At EA, we do not expect an economic boom in the coming years because, according to a survey of 62% of CEOs, according to responses in a report (PwC CEO survey: 2019), they do not expect economic growth. Up to 33% of directors expect an economic downturn and in 2018 there were only 4%!

The idea that monetary policy, even with unconventional tools like QE, would pull EA out of the problem, proved fatally wrong. EA is not a complete economic and monetary union, and fundamental shortcomings remain. The economy will stagnate in the coming years, and we will see greater social problems, and I expect less economic growth and increased

unemployment. I do not expect any economic upswing and growth in EA and the EU in 2020/21 and may really worry about the impending financial and economic crisis in the future. If we look at the EU today, I see economic divergence instead of convergence. We see political and, increasingly, ideological moats, and that leads to a dead-end, a dark time. This is not the road to prosperity.

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Legal Aspects of Work-Life Balance – New EU Directive and Czech Legislation

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Abstract

The work-life balance is being paid a lot of attention by the European Union as it comes to social and family policy. A solution of this topic is perceived as a necessary prerequisite to make an equality of men and women real. A significant tool to fulfill aims of social policy, the social legislation is, through which relations in this area can be regulated. New EU legislation is presented in this paper - Directive 2019/1158/EU on work-life balance for parents and carers, the aim of which is to achieve equality between men and women in the labour market. The Directive came into force on 1st August, 2019 and determined the term, by which member states' internal legal orders should be harmonized – up to 2nd August, 2022. The aim of the paper is to assess, up to what rate the Czech legislation meets the requirements of this Directive or whether, in accordance with those requirements, it will be necessary to accept its changes. The paper is elaborated based on literature review and interpretation of legal regulations. To compare the Czech and EU legal regulation, the comparative method is used.

Keywords: equality of men and women, social legislation, work-life balance

JEL Classification: J83, K31, K38

1. Introduction

Charter of fundamental rights of the European Union sets in art. 23 that equality between women and men must be ensured in all areas, including employment, work and pay. And the principle of equality shall not prevent the maintenance or adoption of measures providing for specific advantages in favour of the under-represented sex. The art. 33 then states that the family shall enjoy legal, economic and social protection. And to reconcile family and professional life, everyone shall have the right to protection from dismissal for a reason connected with maternity and the right to paid maternity leave and to parental leave following the birth or adoption of a child. Equality between men and women is a broad topic which has received considerable attention in the European Union's social and family policy. It can be viewed and addressed from different perspectives, especially legal, sociological, psychological, and economic. The issue that is closely related to this topic is work-life balance. Its solution is perceived as a necessary prerequisite to make an equality of men and women real.

In this paper we focus on work-life balance legislation for parents and carers, which is an important tool of social and labour legislation to achieve the goals of social and family policy in this area. National legislation in the Member States must comply with the principles of EU law. “EU law in the area of social security is not concerned “positive” regulatory harmonization of national social security law. Neither top-down regulation of national social

security law, nor their replacement with a European-level social security regime is on the EC policy agenda. Rather, most EC social security law is concerned with coordination of national social security." (Hervey, 1998, p. 82) Currently, the open method of coordination is in place, with Member States agreeing on a common target and a timeframe to achieve it, while it is up to each Member State how to achieve it (Koldinská et al., 2017). This also applies to new Directive 2019/1158/EU of the European Parliament and of the Council on work-life balance for parents and carers (hereinafter "Directive"), the aim of which is to achieve equality between men and women in the labour market. The Directive came into force on 1st August, 2019 and determined the term, by which Member States' internal legal orders should be harmonized – up to 2nd August, 2022.

The Explanatory Memorandum to the Directive results in the reason to adopt it. Ensuring of the implementation of equality between men and women principles with regard to labour market opportunities and treatment at work across the Union, cannot be sufficiently achieved by the Member States. Better effects can be achieved at Union level, which, in accordance with the principle of subsidiarity and the principle of proportionality, sets out the necessary conditions for the implementation of these principles in specific life situations. The imbalance in the design of work-life balance policies between women and men reinforces gender stereotypes and differences between work and care. It has to be said that the current Union legal framework provides limited incentives for men to assume an equal share of caring responsibilities. The aim of the Directive is to lay down minimum requirements designed to achieve equality between men and women with regard to labour market opportunities and treatment at work, by facilitating the reconciliation of work and family life for workers who are parents, or carers. Those requirements relate in particular to paternity leave, parental leave, carers' leave and flexible working arrangements.

The aim of the paper is to find out up to what rate the Czech legislation meets the requirements of the Directive. By a comparison of work-life balance being regulated by the Directive and the Czech legislation we can discover whether those requirements the Czech legislation meets or whether some legislative adjusting is to be made up to deadline to harmonize Union and national law in this area. Of course, this is not just about keeping the deadline set by the Directive, but above all creating legal prerequisites for realizing the work-life balance of people with care responsibilities in their daily lives.

2. Problem Formulation and Methodology

For employees who execute caring responsibilities, work-life balance is difficult to practice. Especially women are those being responsible because traditional gender patterns still persist about who is the one responsible for domestic work and childcare (Lyonette, 2015). This applies to all EU Member States, including the Czech Republic. As stated by Křížková and Vohlídalová (2009, p. 4) "*... the division of paid work and unpaid care spheres is in Czech society still rather traditional and family policy is largely based on the assumption of a homogeneous population of women who prefers care and homogeneous male population who prefers paid work.*" Maternity and labour law issues are dealt with by Janečková (2013), who considers the disharmony between work and family life one of the basic causes of lower participation of women in the labour market in productive age whereas the main reason she sees in impossibility to ensure quality care for a child in the course of employment. However, it is not only a question of reconciling childcare with employment, although this is the most common perception of work-life balance and caring responsibilities. It is necessary to draw attention to the increasingly up-to-date need for elderly care in the family (Horton, 2015). This

care is actually much more demanding. Dudová and Vohlídalová (2018) deals in detail with the topic of care for the elderly in the Czech Republic.

Work-life balance legislation is an indispensable condition for realizing equality between women and men, since the legal instruments of reconciliation enable women to balance work and care responsibilities better. At the same time, these tools create the preconditions for transferring care responsibilities to men. When adjusting the work-life balance, it is necessary to emphasize issues not only of motherhood, but necessarily the issues of care and the needs of both the person being cared for and the person who cares. The specificity of work-life balance lies in the fact that, from the perspective of law, it is an area on the boundaries of labour and social law, on the boundaries between the prohibition of discrimination on the grounds of gender and the protection of the family (Koldinská et al., 2017). This can be demonstrated in the Czech legislation on instruments of work-life balance. This is contained in both the Act No. 262/2006 Coll., Labour Code, as amended, crucial act for the area of labour relations and the Act No. 187/2006 Coll., on sickness insurance, as amended and in the Act No. 117/1995 Coll., on state social support, as amended, which regulate legal relations in the field of social security.

The paper is elaborated based on literature review and interpretation of legal regulations using analysis and deduction methods. To compare the Czech and EU legal regulation, the comparative method is used.

3. Problem Solution

In order to fulfill the aim of the paper, the following text compares the minimum requirements for the regulation of selected instruments of work-life balance given by the Directive with the current Czech legislation.

3.1 Paternity Leave

The Directive considers the paternity leave the leave from work for father or, where and insofar as recognized by national law, equivalent second parent in the length of 10 working days in minimum. Paternity leave can be drawn at the occasion of the birth of the worker's child. This right shall be granted irrespective of the worker's marital or family status, as defined by national law. Within this period, the employee is entitled to the income equivalent to that which the worker concerned would receive in the event of a break in the worker's activities on grounds connected with the worker's state of health, subject to any ceiling laid down in national law.

As it comes to the Czech law, the Act on sickness insurance regulates conditions and amount of paternity benefit. In accordance with the Labour Code, the time off during this leave is provided at the employee's request in the form of parental leave. The duration of the paternity benefit is seven calendar days and is set at 70% of the daily earnings (or more precisely, the daily assessment base) adjusted to be calculated in the way set by the law.

A comparison of European and Czech legislation on this issue shows that the length of the provision of paternity care benefits in the Czech Republic is shorter. Therefore, a change in the length of the benefit provided can be expected to meet at least the minimum requirement of the Directive. The amount of the benefit is in accordance with the Directive, as in the Czech Republic the amount of income at the time of employee's illness is set at 60% of adjusted daily earnings. Paternity benefit is higher than required by the Directive.

3.2 Parental Leave

By the Directive, the parental leave is considered the leave from work for parent on the grounds of the birth or adoption of a child to take care of that child. Each worker has an individual right to parental leave of four months that is to be taken before the child reaches the age of eight. The condition that two months of parental leave cannot be transferred is very significant. It means that those two months have to be drawn by each parent and cannot be transferred from one parent to another one. Employees can ask for parental leave in flexible ways. Flexibility makes it more likely that each parent, in particular fathers, will take up their entitlement to parental leave. Workers should be able to request that parental leave granted on a full-time or a part-time basis, in alternating periods, such as for a number of consecutive weeks of leave separated by periods of work, or in other flexible ways. The employer has to take such request into account considering the needs of both the employer and the worker. The rejection of the request must be justified in writing. The amount of the allowance at the time of parental leave must be fixed in such a way as to facilitate the take-up of both parents. This mainly regards a minimum non-transferable period so that first earner in a family is able to use his right to parental leave because there will be good allowance ensured and thus dignified living standard.

The Czech Act on state social support regulates conditions and amount of the allowance and the Czech Labour Code regulates time off related to parental leave. Parental leave can be taken by both parents (adoptive parents) up to the child's age of three, and a benefit called parental allowance can be taken up to the age of four. The length of the leave and the length of the parental allowance is the parent's choice. Parents can take turns on parental leave and can take it at the same time. If the parent decides to receive a benefit up to the age of four, he/she may ask the employer, after parental leave, to be granted unpaid leave for childcare purposes. The current amount of the parental allowance is set at CZK 300,000 for the care of one child (approx. EUR 11,900), in the case of twins or more, it is CZK 450,000 (approx. EUR 17,850) for the entire selected period of benefit receiving.

If we compare requirements of the Directive with the Czech legislation, it is clear that Czech legislation is needed to be amended. In particular, the non-transferable entitlement of each parent to two months of parental leave so that both parents take care of the child. Substantial changes should also be made to the way parental leave is taken. Parents should be given the option of flexible drawing of this leave in the form of alternating days of leave and days of work or arranging part-time work instead of full time for parental leave purposes. Other flexible ways can be considered, which are variants of flexible working arrangements and can be used for these purposes (see below). The amount of the parental allowance is in accordance with the general requirement of the Directive. It is necessary to point out a certain disproportion in Czech legislation. It is the possibility to draw parental allowance up to four years of child's age and the length of parental leave up to three years of child's age. As already mentioned, an employee - parent may apply for unpaid leave for the care of a child up to four years of his age. The employer is obliged to comply with it if the child cannot be placed in a pre-school facility. This practice is also supported by case-law. For example, the Supreme Court of the Czech Republic stipulated it in its decision No. 21 Cdo 4411/2007 of 10th October, 2008. If the employee proves the impossibility of doing work due to the impossibility of placing the child in kindergarten, the employer is obliged to grant the leave. The lawmaker could consider harmonizing the legislation on the length of parental leave and the period of receiving parental allowance. In normal life parents often do not distinguish between the two arrangements and get into unnecessary complications when exchanging them.

3.3 Carers' Leave

The Directive implements the term "carers' leave" meaning the leave from work in order to provide personal care or support to a relative, or to a person who lives in the same household as the worker, and who is in need of significant care or support for a serious medical reason. Each worker has the right to carers' leave of five working days per year. Material security during this leave is not addressed by the Directive and leaves this issue to national law.

The Czech legislation does not know the concept of carers' leave. However, employees have the right to leave due to taking care of a household member, which is regulated by the Labour Code. Material security for employee - carer within this period is issued by two benefits regulated by the Act on sickness insurance. The first benefit is the nursing allowance provided in the case of a short-term need for nursing, during which the employer is obliged to automatically excuse the employee's absence from work. Employee - carer and the person being taking care of do not need to be relatives, the only condition is a common household. Nursing allowance is provided for a maximum of the first nine days of need for nursing (16 days in the case of single parents with at least one child up to 16 years of age who has not completed compulsory education). The second benefit is long-term nursing allowance provided in the case of long-term need for nursing a person discharged from hospital to home after hospitalization. In this case, the employer is not obliged to excuse the absence of the employee - carer automatically, however, he has to have serious operational reasons to refuse it. Relatives are entitled to long-term nursing care regardless of the condition of the common household and persons without a relative status when the condition of the common household is met. The benefit is limited to a maximum of 90 calendar days. In both variants, the amount of the benefit is set at 60% of the daily earnings (daily assessment base), which is adjusted for the calculation by the statutory method.

In comparison with the Czech legislation, the Directive only stipulates the minimum length of carers' leave but the amount of earnings not. It leaves this question to be solved by the Member States. However, the Explanatory Memorandum to the Directive makes recommendations as for allowances implementation in order to guarantee the effective interest of carers, in particular men. Despite the Czech legislation does not know the term carers' leave, it can be stated that the adjustment of the nursing allowance and long-term nursing allowance and leave from work whilst receiving these benefits fully complies with the minimum requirements of the Directive.

3.4 Time off from Work on Grounds of Force Majeure

The Directive introduces time off from work on grounds of force majeure. Each worker has the right to time off from work on grounds of force majeure for urgent family reasons in the case of illness or accident making the immediate attendance of the worker indispensable.

The Czech law, namely the Labour Code and the Government regulation deals with time off due to important personal (employee's) obstacles to work. Time off from work on grounds of force majeure is not regulated though, however, entitlement of employee to time off from work while accompanying the family member to medical facility in case of emergency is regulated (urgent illness or injury). Time off from work shall not exceed one day for the necessary period of time. Given that the Directive relates this claim to life situations associated with illness or injury, it can be stated that the Czech legislation complies with the requirements of the Directive in this point.

3.5 Flexible Working Arrangements

The Directive determines that workers with children up to a specified age, which shall be at least eight years, and carers, have the right to request flexible working arrangements for caring purposes. Employers shall provide reasons for any refusal of such a request or for any postponement of such arrangements. When flexible working arrangements are limited in duration, the worker shall have the right to return to the original working pattern at the end of the agreed period.

The Czech Labour Code lays down the employers to take into consideration the needs of female and male employees taking care of children, when assigning employees to shifts. It also regulates the right to only part-time work or some other suitable adjustment to weekly working hours for pregnant female employee or female and male employee taking care of a child who is under 15 years of age. The same right to working hours adjustment such employees have who take long-term care of a person being dependent on another individual's assistance. The employer is obliged to comply with such request unless this is prevented by serious operational reasons.

From the Explanatory Memorandum to the Directive results, that as far as flexible arrangements of work are concern, mainly remote working arrangements, flexible working schedules, or a reduction in working hours are considered. The Labour Code contains the regulation of shorter working hours, flexible working hours and also regulates the conditions for employees who do not work at the employer's workplace and schedule their working hours themselves. The Directive and the Czech legislation do not exclude other possibilities of flexible working arrangements, despite they do not directly adjust them and employers use various modifications of them in practice. Specifically, a shared job can be mentioned. The essence of a shared job is that two or more part-time workers with the same type of work alternate in that place and schedule work hours themselves by shift to meet each week's average working time (Veverková, 2019). Another option is a compressed workweek, when the employee works four days a week instead of the usual five days. As for modern trends of work without physical presence of the employee at the workplace we can mention teleworking, homeworking, smart work or work with the use of cloud computing. Then, when evaluating the employee, the only his/her performance and results are crucial. However, in the case of distance forms of flexible working arrangements, disadvantages for workers under this scheme must be excluded. For example, only the maximum weekly working hours are set, and employees then schedule their working hours by day. Also, employee availability cannot be required 24 hours a day. Collins et al. (2019, p. 43) say "*...helping people to achieve satisfactory work life balance becomes even more fraught when work is demarcated by neither time nor place. In future we are likely to see demands from workers, for a legal right to be left alone and a right to turn off email and messaging systems outside working hours.*" On the other hand, it is necessary to mention practical problematic questions as from employers' perception, which especially limited possibility of organization of employees' work and their control is.

The Directive explicitly stipulates that Member States may introduce or maintain provisions that are more favourable to workers than those laid down in this Directive. The usage of flexible working arrangements will become more significant not only in connection with work-life balance. It will be necessary to make adjustments in the Czech legislation reflecting the needs of practice in the use of variants not yet supported by law. Employers often do not know exactly how to proceed with their implementation and remain in standard working arrangements. Alternatively, they try trial and error, which is also not a solution that would help to stabilize labour relations and work-life balance.

4. Conclusion

The theme of work-life balance is closely linked to the issue of gender equality, which is one of fundamental objectives of the European Union's social policy. Creating conditions for work-life balance is one of the prerequisites to make equality of men and women real. Adoption of the Directive confirms its importance.

The aim of this paper was to find out up to what rate the Czech legislation meets the requirements of the Directive or whether, in accordance with those requirements, it will be necessary to accept its changes. A comparison of the new EU and current Czech legislation became the basis to achieve the aim. The principles of the EU legislation on work-life balance instruments under the Directive were defined. The minimum requirements for their adjustment were compared with the Czech legislation. On the basis of the comparison, conclusions were reached on the compliance or non-compliance of both modifications and on the necessary changes to meet the requirements of the Directive.

In the author's opinion, changes in parental leave legislation and flexibility working arrangements can be expected. The modification of other instruments essentially complies with the requirements of the Directive. This can also be demonstrated by the fact that in the Explanatory Memorandum to the Directive, there is determined that any kind of family-related time off work, that is available under national law or collective agreements should count towards fulfilling the requirements of one or more of the types of leave provided for in this Directive. Member States are not required to rename or otherwise change the different types of family-related leave that are provided for under national law or collective agreements and which count towards compliance with this Directive.

In the Czech Republic, parental leave and parental allowance are important tools of work-life balance. Changes in their legislation must be focused primarily on creating conditions for flexible parental leave. Changes in the above-standard length of parental leave combined with a lack of locally available and affordable childcare services are also considered. As a result, women often leave their jobs for a long time in connection with maternity duties. In the changes under consideration, it is necessary to look at promoting the involvement of men in parental responsibilities. As most fathers do not avail their right to parental leave, there is a requirement for a non-transferable entitlement to take two months of parental leave for each parent. This should motivate the fathers to exercise their right to such leave.

Flexible working arrangements is another tool that the legislator should pay attention to. Employers complain about the increased administrative burden, the economic and tax disadvantages associated with the implementation of flexible working arrangements. Employees are also limited by economic reasons. Particularly in the case of part-time work, it is lower earnings, job insecurity, less career opportunities and the fear of lower pension entitlements in the future. As it comes to remote working arrangements in practice, employees with higher education and mental professions are preferred. This, in conjunction with traditional gender patterns, means that employers prefer to fill such jobs with men. Although women, especially mothers of small children, are interested in it. There is no doubt that flexible working arrangements is an important tool to realize work-life balance in practice, not only in relation to childcare, but also to the care of the elderly or persons with a medical disability requiring care from another person. Czech labour legislation does not impede flexibility in the organization of working time and work. However, it will be necessary to make adjustments according to practical needs.

The paper author assumes further to develop flexible working arrangement in more detail in terms of work-life balance and equality of women and men. It would be also good idea to

elaborate the issue of work-life balance based on the comparison of legal regulation and functioning of work-life balance tools in the Czech Republic and the EU best practices countries.

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European Union Climate and Energy Policy Based on an Analysis of Issued Legal Acts

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Abstract

The article presents the development of the European Union climate and energy policy based on issued legal acts. It shows the historic path of transition from fossil energy sources to the green economy in EU countries. The co-decision procedure under many EU legal instruments was discussed. The article contains an analysis the most important legal acts and documents regarding EU climate and energy policy, which entered into force in the years 2007 - 2018. However, the main challenges for the development of the green economy in the EU are indicated in the perspective of 2030, for which specific values have been set to achieve in several fundamental planes. Strategic goals are recognized until 2050. The article presents the complexity of the issue resulting from the different economic and political strategies of many EU Member States despite the general agreement to create a more competitive, sustainable and safer from an energy point of view, green European economy.

Keywords: climate and energy policy, energy sources, European Union, green economy.

JEL Classification: A11, E61, F42, K32, L51, O11, Q54.

1. Introduction

Access to energy sources is undoubtedly one of the basic factors of economic development. Europe is increasingly dependent on oil and gas imports with a steadily increasing demand for these raw materials. Therefore, the lack of diversification of energy sources is becoming a problem, as well as the issue of security of its supply, directly related to the dimension of EU external activities (Leveque, Glachant, Barquin, Holz and Nuttall 2014). At the same time,

Member States are facing the need to build competitive internal energy markets and increase energy efficiency (Tatarzyński, 2007). In addition, the Union responds to global problems that result from climate change (Skrodzka, 2018). Undoubtedly, all EU countries want to pursue the goal of reducing CO₂ emissions. However, they differ in how this should be achieved. First of all, the strategy of limiting negative climate change must be globally effective and must not significantly limit the economic development and welfare of societies. That is why, as part of the EU climate and energy policy, priority should be set first, which should be achieved first, because all tasks in the short term by 2030 cannot be implemented, including due to limited resources. The nature of the challenges in the field of energy security creates an unprecedented platform for enhanced cooperation and co-shaping of the EU's climate and energy policy. The EU strategy based on the diversification of energy sources will contribute to the development of competition and will allow to take into account the requirements of environmental protection, and will also be the reason for balancing the interests of energy enterprises and energy consumers. However, attention should also be paid to the limitations and reality of EU plans for individual countries and economic effects that may occur as a result of the introduction of adverse processes enforced by the EU, e.g. financial penalties and the market of CO₂ emission allowances, which will mainly affect developing countries and will result in the emergence of natural monopolies among developed countries. The impact of such activities on the functioning of economic entities will be enormous. Therefore, care should be taken to ensure sustainable development of all EU member states and ensure energy security in a manner that will be based on the principles of rational and efficient use of energy resources. The demand for energy resources among the EU countries is enormous, which is confirmed by the fact that EU countries consume 16% of energy produced in the world and must import it to a large extent (Dannreuther and Ostrowski 2013). Therefore, the EU climate and energy policy should take into account the specificity of energy mixes of individual countries. The plans of the European Commission should take into account the specificities of specific countries and their development strategies. Arguments such as the economic efficiency of production and the possibility of using production produced for other purposes, as well as technological development in harmony with ecology, speak for stable and thoughtful changes that will lead to the path of sustainable development of EU countries. The article analyzes the most important legal acts and documents on EU climate and energy policy that entered into force in 2007-2018. The main challenges for the development of the green economy in the EU are indicated in the perspective of 2030, for which specific values have been set to achieve in several fundamental planes. However, strategic goals are recognized until 2050. Discusses the basic problems associated with the possibility of achieving the goals often exaggerated, as zero-emission economy.

2. Problem Solution

The development of a European energy policy will be a long-term challenge (Boguniewicz-Zabłocka, Łukasiewicz and Guida, 2019). It requires a clear but flexible framework: clear in the sense that it expresses a common approach approved at the highest level, and flexible because it will need to be updated periodically (Malko, 2006). The Commission has proposed a regular strategic review of EU energy to be presented in the Green Paper. This will be a kind of inventory of the current energy policy and an action plan to be presented to the European Council, which, by monitoring progress and changes in the situation, will identify new challenges and ways of responding in all aspects of energy policy.

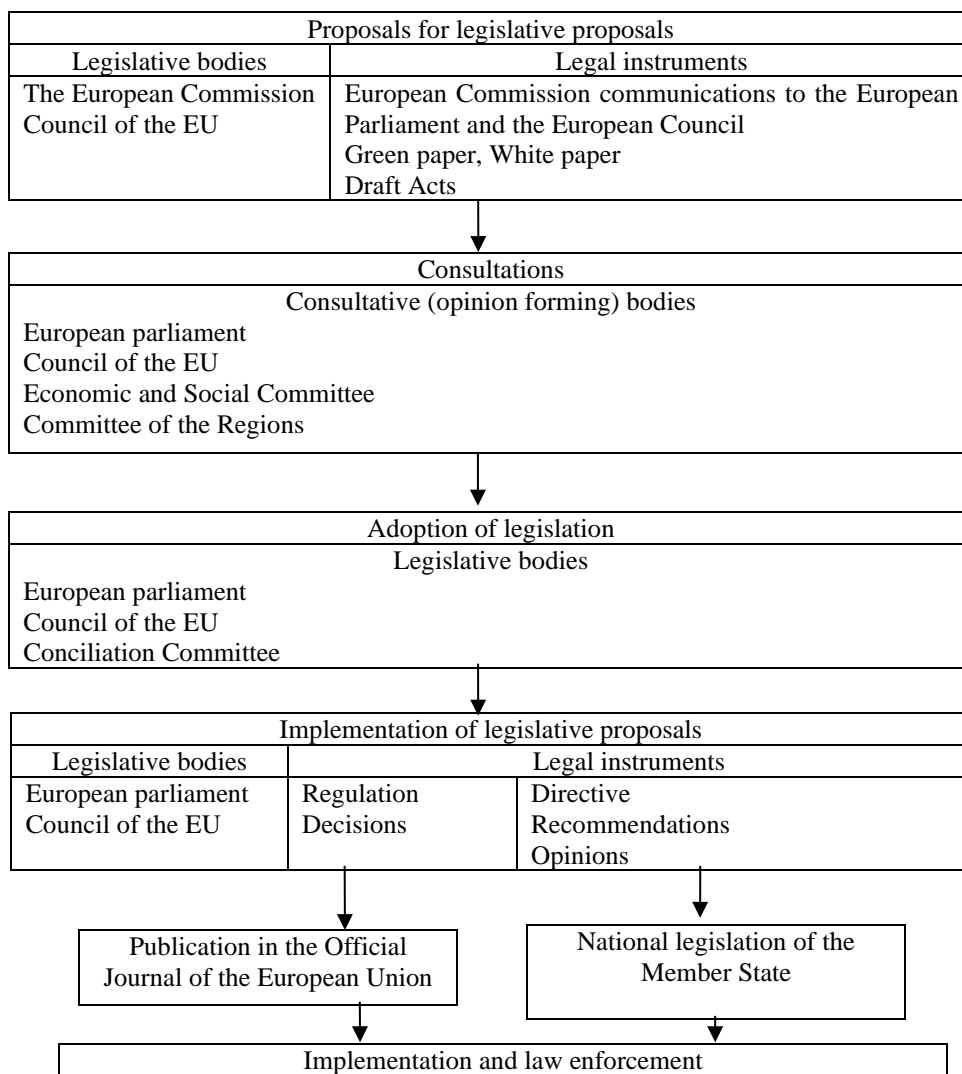
2.1 Communications, Directives and Regulations in the 2030 Perspective

The basis for the creation of specific EU legislation in the field of the energy sector are treaty provisions. These provisions regulate, among others, matters related to competition, state aid and the energy market. Based on them and on legal regulations contained in ordinances and directives, it is possible to shape the energy market. Rules for responding to crisis situations are defined. The safety of nuclear power is supervised, energy efficiency is improved and environmental protection principles are created. Regulations on compulsory stocks and other crisis solutions enabling the Member States to comply with the provisions of the International Energy Agency (IEA) have been introduced in the Union. In accordance with the provisions of the Maastricht Treaty, energy policy is part of industrial policy and should therefore be shaped under the general provisions of the Treaty. Under this Treaty, member states cooperate with each other in the sphere of energy economy regarding individual energy carriers, i.e. coal under the ECSC, nuclear energy under Euratom, oil, electricity and gas, and reduction of CO₂ emissions (SAVE Program), renewable energy sources (ALTER Program), environmental protection (CO₂ emissions, energy tax), trans-European energy networks, research and technology development (JOULE - THERMIE Program) (European Union Law [on-line], 2018).

The European Commission communications to the Council and the European Parliament are designed to present legislative proposals as part of setting goals and priorities for action. In this way, the Commission watches over EU policy and its budget, as well as the implementation and enforcement (together with the Court of Justice) of European law. The European Commission also represents the EU internationally, for example in negotiating trade agreements between the EU and third countries. However, this only applies to agreements that represent the EU as all compatible Member States. Despite the fact that there were such ideas in the EU arena, due to disagreement, the liberalized energy market is not subject to the European Commission's actions on these agreements and Member States negotiate energy trade agreements themselves. An important element of integration with the European Union is the harmonization of the legislative system in various negotiation areas. The EU legal system is based on:

- a. primary sources of law, namely the founding treaties, such as the Maastricht Treaty on the EU and other agreements governing the functioning of the Union,
- b. secondary sources of law as a system of norms that are used to transfer EU legislative principles to the legal systems of member countries. Secondary law is created by regulations, directives, decisions as well as recommendations and opinions.

Integration with the European Union requires identifying and overcoming barriers in technology, organization, economics and legal regulations. Basic obstacles, both substantive and formal, occur when harmonizing the legislative sphere, because it creates a framework for solving problems on the road to coherent cooperation and achieving EU policy objectives in the Member States. For obvious reasons, EU directives have become the basis for creating national legal regulations of the member states regarding the energy market. The energy market legislation has been brought into line with European legislation, and figure 1 shows the co-decision procedure within the EU Member States.

Figure 1: Legal Acts and Co-decision Procedure in the European Union

Source: Own study based on: (Oniszk – Popławska 2004; Malko, 2006; European Union Law, 2018).

The legal instruments in EU legislation have the following specificities:

1) Directives are binding and are normative acts issued by the EU Council or also jointly with the European Parliament. They are not of universal application but refer to member countries. Therefore, directives bind Member States only in terms of results, objectives and deadlines for achieving them, but they leave the state's internal organs free to choose the form and methods of achieving these objectives. The state is to implement the provisions through any statutory, executive or administrative act appropriate for that state. Directives are often used in the process of harmonizing European law and in order to harmonize the economic policies of the Member States. A citizen of a Member State has the right to bring an action in court in the event of failure to comply with the indications set out in the directives.

2) The decisions are directly applicable to individual Member States as well as to companies and legal entities. Decisions are issued in relation to specific legal entities and apply automatically, do not need implementing acts and are binding.

3) Regulations are acts in force in their entirety in every EU member state and have direct binding force, which means that they do not require any transformation into acts appropriate for a given country (e.g. laws). They contain legal norms that apply to everyone directly in the Member States, including the citizens of these countries. Regulations are divided into basic ones, which regulate essential matters and are issued in the treaties, and implementing ones, which specify the ways of implementing basic regulations.

4) Recommendations and opinions are not legally binding. Member countries may choose to use them in whole or in part, or completely refrain from using them.

5) The Green Paper in European Union terminology is a document presenting the current state of an issue, serving the consultation procedure between EU institutions as well as with Member States and EU citizens. Often, Green Papers are simply called strategy assumptions that require consultation. The Green Paper is a report gathering information on a specific topic and is usually the starting point for the development of the White Paper.

6) The White Paper constitutes concrete proposals from the European Commission for EU action. This is the EU strategy for action and is a strategic document expressing the political will to be taken into account in making future decisions, but it is not a legally binding document but it sets out further directions of legislative work.

2.2 Development of the EU Climate and Energy Policy and its Main Challenges

Due to the fundamental importance of energy for the economies of the Member States, the European Commission reviews the energy situation every year and updates the strategic report on EU energy and transport in the 2030 perspective every two years (European Commission, 2010). On March 8, 2006, the European Commission published Green Paper, which deals with the creation of a common, coherent European energy policy (Powers, 2012). The document included a call to ensure sustainable energy development in Europe, increase the competitiveness of the European energy market (thanks to, among others, its liberalization) and increase the security of energy supplies. The Green Paper is a typical example of an EU compromise document in which each country can find solutions that suit it. The Commission merely formulated general proposals without outlining specific objectives and recommendations. The Green Paper was intended to launch the next consultation of the Member States and to develop a legal framework for EU energy and climate policy by 2030. The Green Paper raised a number of complex and controversial issues, including: at what level should the 2030 climate goals be met, how to ensure coherence between the various policy instruments, how to increase the competitiveness of the EU energy market, and how to take into account differences in possibilities for action individual Member States. This shows the complexity of the issue, the multiplicity of problems to be solved and conflicts of interest between countries and industry sectors that represent specific energy sources. On the other hand, to ensure an adequate level of investment that will guarantee sustainable growth, competitive and affordable energy prices, and greater energy security, goals and frameworks for climate and energy policy up to 2030 must be set that are not contradictory but complementary. Changes in the global situation should also be taken into account, including political, in the field of energy, or the consequences of the economic crisis, which forces the revision of achievable long-term goals, such as reducing emissions by 80-95 percent. until 2050 (European Commission, 2018).

In addition, the EU cannot assume tasks and goals that are detached from reality and unrealistic to fulfill at the time of their adoption (Miciuła, 2019). There are many unrealistic goals in official EU documents and regulations that are also contradictory and contradictory to other EU goals, for example achieving a competitive energy market with the intense introduction of expensive solutions for environmental protection and high taxes, sometimes even exceeding the cost of purchasing energy resources (Makdissi and Wodon, 2006). An example from another area is to achieve the number of fatalities in road accidents close to zero by 2050, which contributes to the frivolous treatment of EU plans and regulations. In addition, the lack of implementation of the EU provisions, their renegotiation at a later date and the creative statistics of the Member States confirm the effectiveness and legitimacy of such actions. In March 2007, the European Parliament adopted a climate and energy package (the so-called 3 x 20% package) (Pach-Gurgul, 2015) containing the following objectives for the EU:

- a. reducing greenhouse gas emissions by at least 20% in 2020 compared to the base year 1990,
- b. increasing the share of energy from renewable sources in final energy consumption to 20% in 2020, including a 10% share of biofuels in the consumption of propellants,
- c. increasing the efficiency of energy use by 20% by 2020 compared to the forecast of fuel and energy demand.

At the same time, it is estimated that by 2030 the EU's dependence on energy imports will increase from 50% to 65%. In the case of raw materials such as oil and gas, this dependence will be even greater, namely from 82% to 93% and from 57% to 84%, respectively (European Commission [online], 2010). The European Commission citing the International Energy Agency (IEA) claims that by 2030 global demand for oil will increase by 40%, which carries a risk of political and economic nature (price increase) (Waddams, Brazier and Wang, 2012). Unfortunately, the adoption of numerical values for only one strategic goal and the most controversial in the so-called the triad of EU goals results in the marginalization of the others, especially when contradictions between these goals occur (Stępień and Miciuła, 2019). Even worse, as the European Commission itself notes, mechanisms to ensure solidarity between EU Member States in the event of energy crises do not currently exist. Based on the above-mentioned premises, the Commission has identified three main challenges that will await the European Union in the coming years. These are: the increasing dependence of the EU on imports (insecurity of supply), higher energy prices and interdependence of EU countries in terms of energy and climate change, although this is controversial given that there are theses that global temperature increase by approx. 2 - 3 °C is even recommended.

Regulation (EC) No 663/2009 of the European Parliament and of the Council of 13 July 2009 established an economic recovery program by granting financial assistance to projects in the field of energy. This Regulation aims to create a European Energy Program for Recovery (EEPR) to finance projects in three main areas of the energy sector:

- a. gas and electricity infrastructure,
- b. offshore wind energy,
- c. carbon capture and storage.

Undoubtedly, it should be noted that there are many contradictions in EU projects that may result from provisions supported by various interest groups as to energy sources. In legal acts and documents (in theory), a lot of space is devoted to renewable energy sources (RES) and indicates the need to move away from coal as an energy source responsible for CO₂ emissions, while in practice specific amounts supporting clean coal technologies are specified. Therefore, a compromise must be indicated which consists in the use of energy-efficient energy resources for a given Member State in the current technological (Tomabechei, 2010) and geographical

situation, together with the possibility of supporting the reduction of greenhouse gases, which is an excellent and above all an effective example of carbon capture and storage technology. The program finances interconnection projects for the following objectives:

- a. security and diversification of energy sources and supplies,
- b. increase in the capacity of the energy network and integration of the internal energy market,
- c. development of networks and connections of renewable energy sources,
- d. reliability and interoperability of connected energy networks.

In response to the dual crisis (financial and energy), at the end of 2008, the European Commission presented an economic recovery plan, of which the European energy program for economic recovery is a key element. It was noticed that it is too early to make extensive use of renewable energy sources due to too expensive technology and the financial result of these investments. Even in Germany, there has been a criticism of the broad renewable energy investment strategy. Also critically referred to the costly for economies to succumb to the influence of the European Green Party responsible for the panic associated with climate change and moving away from nuclear energy. At the same time, EU foreign policy on energy and climate issues was criticized because of the lack of solidarity among member states and the lack of implementation of external strategic infrastructure investments for new directions of supply of energy sources. The energy crisis between Russia and Ukraine has created a completely different approach to goals and priorities in the field of energy. The European Commission has announced that the priority is investment in transmission networks and energy connections that will ensure the integration of the EU energy market and energy security. The investments were estimated at EUR 200 billion. The scale of these forecasts shows the importance that the Union finally began to attach to energy policy as part of the joint agreement of EU Member States. This underlines the fundamental importance of energy sources for economies, due to the direct impact on the competitiveness of economies through the impact on prices. However, due to the adoption of specific values to be achieved only for one purpose, it has become fundamental to achieve, and in addition, among these assumptions there are contradictions and the implementation of one may cause a departure in other goals in the opposite direction (Stępień and Miciuła 2016). In addition, the Commission published a consultative communication on the future of carbon capture and storage (CCS) in Europe. It also adopted a report assessing the progress made so far by EU countries in meeting their renewable energy targets (to be achieved by 2020) and a summary of biofuels and bioliquids used in the EU. In response to the analysis of the current situation on the energy market in the EU, the Energy Commissioner Günther Oettinger announced the easing of the EU climate policy and postponing the implementation date of its assumptions from 2020 to 2030 as well as ongoing monitoring and assessment of tasks with the possibility of postponing implementation dates or even changing targets strategic (Oettinger 2011). The restructuring of the energy sector is dynamically taking place on an unprecedented scale in the search for a balance between market mechanisms and regulation. Numerous documents of the European Commission shown in table 1, which are secondary sources of law, create opportunities for achieving the EU's strategic goals by achieving partial goals.

Table 1: The Most Important Legal Acts and EU Documents Regarding Energy and Climate Policy Adopted in 2007-2018

Legal acts and documents	Application year
Communication from the European Commission - European Energy Policy, COM (2007) 1 final, 2007	2007
Green Paper: Market instruments for environmental and related policy, COM (2007) 140	2007
Communication from the Commission - European Strategic Energy Technology Plan (SET Plan). The road to the low-carbon technologies of the future, COM (2007) 723	2007
The Cleaner Air for Europe Directive (CAFE) Directive 2008/50 / EC	2008
Communication from the European Commission - Energy efficiency achieving the 20% target, COM (2008) 772, 2008	2008
Directive 2009/125 / EC on ecodesign for energy-related products	2009
Directive 2009/28 / EC on the promotion of the use of energy from renewable sources, setting a target of 20% share of energy from renewable sources by Member State.	2009
White Paper: Adaptation to climate change A European framework for action, COM (2009), 147	2009
Directive 2010/75 / EU of the European Parliament and of the Council on industrial emissions (the so-called "IED Directive")	2010
Directive 2010/31 / EU on the energy performance of buildings	2010
Communication from the European Commission - Energy 2020, COM (2010) 639	2010
White Paper: Plan for creating a single transport area - striving to achieve a competitive and energy-efficient transport system, COM (2011) 144, March 2011	2011
Green Paper: Lighting for the future - accelerating the implementation of innovative lighting technologies, COM (2011) 889, December 2011	2011
Directive 2012/27 / EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amendments to Directives 2009/125 / EC and 2010/30 / EU	2012
Green Paper: A 2030 framework for climate and energy policies, COM (2013) 169	2013
European Commission report - Implementation plan for European infrastructure projects in energy, COM (2013) 791, 2013	2013
Communication from the European Commission - European Energy Security Strategy, COM (2014) 330 final, May 2014	2014
European Council - Conclusions on the 2030 climate and energy policy framework, SN 79/14, 24 October 2014	2014
Strategy for the Energy Union	2015
EU greenhouse gas emission allowance trading scheme - EU ETS	2015
Assessment of policy options for the review of Directive 2010/31 / EU	2016
The energy sector as one of the pillars of growth, competitiveness and development for modern economies. EU energy in numbers.	2017
The role of trans-European gas infrastructure in the light of the decarbonisation goals	2017
New rules on renewable energy, energy efficiency and management	2018
The EU's low-carbon strategy until 2050	2018

Source: own study.

Changes regarding the strategic goals of the climate and energy policy, which also result from changes in the geopolitical situation, force continuous changes of provisions and introduction of new regulations. Unfortunately, this is not conducive to the quick and effective implementation of EU provisions and at the same time shows the complexity of the co-decision process.

3. Conclusion

The European Commission announced the communication 'Energy 2020, a strategy for competitiveness, sustainable development and energy security'. Again, the so-called a triad of EU goals in climate and energy policy, but with a shift of gravity to security of energy supply and the competitiveness of the EU energy market. The new strategy aims to secure sustainable energy supply for the EU and support economic growth. Energy 2020 is a plan to reduce energy consumption, increase market competitiveness, ensure stable energy supplies and coordinate negotiations with its suppliers, and achieve EU targets in the fight against climate change. Energy demand is expected to rise rapidly after the end of the recession. The new strategy is therefore aimed at preventing interruptions in energy supply and supporting economic growth, including by increasing competitiveness and reducing energy commodity prices. The consequence of further work on creating conditions for the implementation of EU energy policy was the adoption by the European Commission of the Infrastructure Package under the name: "Priorities for energy infrastructure for 2020 and in the longer term - an action plan for an integrated European energy network". Clear rules in this area are intended to guarantee investment certainty and stimulate innovation and demand for low-carbon technologies, thus contributing to the creation of a more competitive, sustainable and energy-safer European economy. The basis for the new framework will be the experience of implementing the framework for the period up to 2020, so you can identify what areas need improvement. Making such a comparison will require taking into account the changes that took place after 2020 in the energy and economic system, as well as in the international situation. The lack of agreement between EU Member States regarding the strategic goals of climate and energy policy forces constant changes of provisions and new regulations amending previous rules, which is not conducive to the quick and effective implementation of EU provisions. The European Council presented the 2030 framework for action under Note SN 79/14 - conclusions on the 2030 climate and energy policy framework on 24 October 2014, subject to possible changes depending on the current situation, which shows the complexity of the issue and the difficulties in working out compromise for so many different EU Member States.

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Education as a Fundamental Element Shaping Human Capital – Perspective of EU Countries in the Context of the Europe 2020 Strategy

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Abstract

The main purpose of the paper is to assess the level of education as a factor shaping human capital in the EU (European Union) countries in the context of implementing the targets of the Europe 2020 Strategy. Pursuing the paper's objectives and adopted research tasks is possible by means of a critical analysis and a critical assessment of relevant secondary indicators and an in-depth literature review. The spatial scope of the analysis includes 28 EU countries. The time horizon spans over the years 2010-2019. The year in which the European Commission presented the proposal for the Europe 2020 Strategy was adopted as the starting point for the analysis. It needs to be recognized that EU countries are diverse in terms of implementation of objectives of the Europe 2020 Strategy as well as the level of education. However, in the context of pursuing other targets of the Europe 2020 Strategy the implementation of education-related objectives turns out positive.

Keywords: education, EU countries, Europe 2020 Strategy, human capital

JEL Classification: I25, J24, F59

1. Introduction

European economy is becoming to an ever greater extent a knowledge-based economy. However, there are no possibilities of strengthening and developing it without a strong emphasis on human capital whose essential elements include knowledge, skills and qualifications gained i.a. in the course of education. It is because human capital is the basis of development of entire economies and individual undertakings. Its level may affect i.a. innovation and competitiveness of economic entities. This is why it is so important to support its development, to invest in it at all levels, that is at the level of an individual, organization as well as the entire society.

In view of the above, the main purpose of the paper is to assess the level of education as a factor shaping human capital in the EU countries in the context of implementing the targets of the Europe 2020 Strategy. Pursuing the paper's objectives and adopted research tasks is possible by means of a critical analysis and a critical assessment of secondary data of relevant indicators and an in-depth literature review. The spatial scope of the analysis includes 28 EU countries. The time horizon spans over the years 2010-2019. The year in which the European Commission presented the proposal for the Europe 2020 Strategy was adopted as the starting point for the analysis.

2. Theoretical Introduction - Education as an Element of Human Capital

T. W. Schultz is considered the creator of the current theory of human capital, who believed that every man has innate skills and skills acquired through development, education and upbringing. Human capital means characteristics acquired by the population which have values that qualify for correction, strengthening and improvement by adequate investment (see: 1961; 1981). At present the term human capital is used in reference to almost all areas of social functioning, but it seems that it refers to a greater extent to the education or labour market sector since this term encompasses “non-material elements - individual employees’ capabilities, knowledge and acquired skills” (Makuch, 2009, p. 13). It is those elements that play the main role in the theory of human capital, which claims that in the course of education people develop their mental capabilities and technical skills, thanks to which their performance potential as the labour force on the labour market increases (Ogbu, 1984, p. 104). The literature features a number of approaches to and definitions of this term (e.g. Domański, 1993; Armstrong, 2006; Tittenbrum, 2017; Sung et al., 2018) while M. Herbst (2007, p. 11) claims that they are often narrowed down to education.

Various views that can be found in the literature on the very essence, role of human capital (see: Mankiw et al., 1992; Barro, 2001; Kucharcíková, 2011) consistently point to main groups of activities that develop it (often defined as investment in human capital). They include: learning, within family and early childcare settings, formal education and training including early childhood, school-based compulsory education, post compulsory vocational or general education, tertiary education, public labour market training, adult education, etc., workplace training as well as informed learning at work through specific activities such as research and innovation or participation in various professional networks, informal learning “on-the-job” and in daily living and civic participation, health-protection services affecting human vitality and life expectancy, human migrations caused by the desire to find better employment or to adapt to the changing conditions, to search for information on the company’s economic standing and professional perspectives, as well as scholarly research (OECD, 2001; Domański, 1993; Giziene et. al., 2012).

In view of the above, an approach to human capital as “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” (OECD, 2001, p. 18) seems most adequate from the point of view of the subject-matter of this paper.

The literature, both in the past and now, points to human capital’s key importance in social and economic development (see: Romer, 1990; Mankiw et al., 1992; Barro 2001; Greer et al., 2017). All countries, not only those from highly developed areas, are encouraged to develop and introduce more improved education systems. Their implementation is to bring about a boost in wealth and an improvement of the societies’ quality of life.

A society may be deemed as learning, smart and efficiently moving about in the surrounding reality when each of its individuals is well-educated and prepared for life - thus, where the quality of human capital is at a high level. A high level of human capital translates i.a. into an increase in innovation and academic research (Mazur-Wierzbicka, 2019), which is crucial in creating the so-called smart growth that makes up one of the pillars of the Europe 2020 strategy which is a long-term comprehensive programme for social and economic development implemented in the countries of the European Union since 2010.

3. Implementation of the Europe 2020 Strategy in Terms of Education

Europe 2020 is an economic strategy of the European Union replacing the Lisbon Strategy. New challenges such as the world financial crisis or the ageing society have forced Europe to redefine goals and instruments that support economic development. They significantly impact the functioning of state economies, their labour markets and also more broadly: the society. In consequence, they also translate into the functioning of the education system. In turn, a broadly understood education (learning and training) contributes to the achievement of a performance increase, innovation and finally competitiveness. Therefore, it is important to investigate this area of EU activity in terms of its desired development.

The Europe 2020 strategy focuses on three interrelated priorities: smart growth (initiative: Innovation Union, Youth on the move, A digital agenda for Europe); sustainable growth (initiative: Resource efficient Europe, An industrial policy for the globalisation era) and inclusive growth (initiative: An agenda for new skills and jobs, European platform against poverty) (European Commission, 2010). Each of them was assigned the so-called flagship initiatives. Some of the flagship initiatives refer directly or indirectly to the subject-matter of education in the EU.

Fundamental importance must be attributed to the initiative “Youth on the move”. The aim is to enhance the performance and international attractiveness of Europe's higher education institutions and raise the overall quality of all levels of education and training in the EU, combining both excellence and equity, by promoting student mobility and trainees' mobility, and improve the employment situation of young people (European Commission, 2010).

Upper-level secondary education is assumed the minimum desired level of education for EU citizens. Skills and competences acquired at this level are considered necessary for an effective entry into the labour market and a basis for lifelong learning. Early school leavers deprive themselves of basic skills essential on the labour market, which may lead to their weaker position there (e.g. undertaking unstable low-paid employment). It may also lead to them experiencing poverty and social exclusion. As a consequence, such persons may have to resort to a great extent to social assistance programmes. Therefore, it is essential to ensure that young people stay in education.

Early education leaving has negative consequences not only for the individual, but also for the economy and especially for the labour market. This is manifested i.a. by the loss of potential national income, decreasing related tax proceeds, an increase in the demand for social benefits, a worse state of health in this social group, decreased awareness of processes taking place in the economy and a marginal participation in social and political life.

An important factor for the development of tertiary education and for increasing competitiveness involves ensuring a highly-qualified human capital. This is mainly supported by the development of tertiary education associated with the development of research and innovation. The development of tertiary education, associated with the development of research and innovation, is currently gaining ever greater importance due to quick technological progress which boosts the level of global competitiveness and an observable increase in the labour market's demand for specialised and educated employees who mainly have technological skills. It is primarily due to the said priority of “smart growth” that the Europe 2020 strategy assumes prevention of early school leaving by young people and boosting the level of tertiary education.

In reference to the above-mentioned three priorities the Europe 2020 strategy, adopts five headline targets, which the EU is to achieve by 2020 the latest. A target on educational attainment which involves tackling the problem of early school leavers by reducing the drop

out rate to 10% from the current 15%, whilst increasing the share of the population aged 30-34 having completed tertiary education from 31% to at least 40% in 2020 (European Commission, 2010). These targets are related to other goals adopted in the Strategy since the higher the level of education, the greater employment chances, which in turn contributes to decreasing poverty. Additionally, the target addressing tertiary education is connected with the research and development (R&D) target and the innovation target. One may assume that investment in the R&D sector will lead to an increase in the demand for highly-qualified employees. Taking into account national contexts, each EU state was assigned an adequate level of a national target (except for the UK) concerning early school leavers “Early school leaving (%)”. The established national targets hover from 4% for Croatia to 16% for Italy.

Table 1: Target Indicators for Early Education Leaving and the Degree of their Implementation in the EU-28 in 2010, 2018 and 2019 (%)

Country	Target	Total			Females			Males		
		2010	2018	2019	2010	2018	2019	2010	2018	2019
EU-28	10.0	13.9	10.5	10.3	11.9	8.8	8.6	15.8	12.2	12.0
Belgium	9.5	11.9	8.6	8.4	10.0	6.5	6.1	13.8	10.6	10.6
Bulgaria	11.0	12.6	12.7	13.2	12.9	12.8	12.6	12.4	12.6	13.7
Czechia	5.5	4.9	6.2	6.2	4.8	6.1	6.1	4.9	6.4	6.3
Denmark	10.0	11.5	10.4	10.1	8.4	8.1	7.8	14.5	12.7	12.3
Germany	10.0	11.8	10.3	10.4	11.0	9.1	8.6	12.5	11.5	11.9
Estonia	9.5	11.0	11.3	10.5	7.6	6.4	6.1	14.4	16.1	14.8
Ireland	8.0	11.9	5.0	5.3	9.3	3.9	4.3	14.5	6.1	6.2
Greece	10.0	13.5	4.7	4.3	10.6	3.6	3.3	16.4	5.7	5.3
Spain	15.0	28.2	17.9	17.2	22.6	14.0	13.0	33.6	21.7	21.2
France	9.5	12.7	8.9	8.3	10.2	6.9	6.9	15.3	10.8	9.7
Croatia	4.0	5.2	3.3	3.1	3.8	3.1	3.0	6.5	3.5	3.2
Italy	16.0	18.6	14.5	13.7	15.3	12.3	11.5	21.8	16.5	15.8
Cyprus	10.0	12.7	7.8	8.3	9.8	6.0	6.5	16.2	9.9	10.3
Latvia	10.0	12.9	8.3	8.8	9.0	5.0	6.6	16.7	11.4	10.9
Lithuania	9.0	7.9	4.6	4.4	6.0	3.0	2.8	9.8	6.1	6.0
Luxembourg	10.0	7.1	6.3	6.8	6.0	5.9	5.1	8.0	6.8	8.4
Hungary	10.0	10.8	12.5	12.0	10.1	12.3	10.9	11.5	12.6	12.9
Malta	10.0	23.8	17.4	16.7	17.4	15.7	15.1	29.9	18.8	18.1
Netherlands	8.0	10.1	7.3	7.4	7.7	5.3	5.5	12.4	9.3	9.3
Austria	9.5	8.3	7.3	7.5	8.3	5.7	6.0	8.4	8.9	9.0
Poland	4.5	5.4	4.8	5.1	3.5	3.7	3.8	7.2	5.8	6.4
Portugal	10.0	28.3	11.8	10.7	24.0	8.7	7.5	32.4	14.7	13.8
Romania	11.3	19.3	16.4	15.7	19.0	16.1	15.9	19.5	16.7	15.5
Slovenia	5.0	5.0	4.2	4.5	3.3	3.0	3.4	6.4	5.3	5.5
Slovakia	6.0	4.7	8.6	8.0	4.9	8.8	7.6	4.6	8.3	8.3
Finland	8.0	10.3	8.3	7.6	9.0	7.4	6.6	11.6	9.2	8.7
Sweden	7.0	6.5	7.5	6.8	5.5	6.0	5.5	7.5	8.8	7.9
United Kingdom	:	14.8	10.7	11.0	13.9	9.1	9.6	15.6	12.2	12.3

Source: compiled on the basis of Eurostat data.

Taking into account the data in Table 1 one can conclude that:

- 8 countries decided to implement the discussed indicator at the level recommended by the EU,
- 5 countries adopted an indicator at the level higher than recommended,
- 5 countries decided to lower the indicator by only 0.5 %,
- Greece adopted an indicator only 0.3% below 10%,
- 3 countries set the indicator at the level of 8%,
- 4 countries, including Poland adopted the indicator from the 4%-6% range.

In 2019 16 Member States reached their national targets already. Among the EU countries there is an observable differentiation in terms of the development of the said indicator. The lowest percentage of early school leavers (below 5%) was observed for Croatia, Slovenia, Lithuania, Greece and Poland. In turn, the “Early school leaving (%)” indicator was significant mainly in southern countries such as Spain 17.2%, Malta 16.7% and Romania 15.7%. One also needs to point to countries which achieved the greatest progress in the discussed area in 2010-2019 and they include mainly Portugal (from 28.3% down to 10.7%), Spain (from 28.2% down to 17.2%) and Malta (from 23.8% down to 16.7%). On the other hand, there were also EU states where the percentage of early school leavers was higher in 2018 than in 2010 (Slovakia, Sweden, the Czechia, Hungary and Bulgaria).

For the EU states, the percentage of early school leavers continued to drop steadily from 13.9% in 2010 to 10.3% in 2018. Nevertheless, the last four years have seen a slowing down of the pace of the drop, which may result in failure to achieve the assumed target by the end of 2020. To generalize, in 2019 17 Member States were already below the general EU target of 10%. Statistical data shows that in general in the EU more men than women leave education earlier.

With an optimistic view that all countries will achieve the set target by 2020 there will still be vast discrepancies among the EU-28 countries in terms of people leaving education early. Individual countries will improve their situation in the discussed area with reference to their starting point, but a great discrepancy between them still remains.

The second educational target of the Europe 2020 strategy, that is increasing the share of the population aged 30-34 having completed tertiary or equivalent education to at least 40%, was achieved in 2018 (40.7%). Table 2 includes target values of the said indicator - most countries adopted a target indicator equal to or higher than the one proposed by the EU.

The target for tertiary education was established for each EU country individually. Contexts of individual countries were taken into account while establishing them (from 26% for Italy to 66% for Luxembourg). The target given to Germany differs from the EU general target since it includes post-secondary non-tertiary education and tertiary education (ISCED, Level 4). In turn, for France this target was set adopting a 17-33 age range, while in Finland this target excludes earlier education and vocational training.

Given the above, one may believe that the idea of advancing tertiary education among the European society will strengthen the intellectual development of the EU countries on the one hand, and still will cement the differences between individual countries on the other.

Table 2: Percentage of People Who Have Completed Tertiary Education Aged 30-34 in the EU-28 Countries in Years: 2010, 2018 and 2019

Country	Target	Total			Females			Males		
		2010	2018	2019	2010	2018	2019	2010	2018	2019
EU-28	40.0	33.8	40.7	41.3	37.3	45.8	46.3	30.3	35.7	36.3
Belgium	47.0	44.4	47.6	47.5	50.0	54.5	55.2	39.0	40.6	39.7
Bulgaria	36.0	28.0	33.7	32.7	35.9	40.8	39.0	20.5	27.0	26.7
Czechia	32.0	20.4	33.7	34.9	22.3	40.6	41.0	18.6	27.3	29.1
Denmark	40.0	41.1	48.4	49.1	46.4	55.8	56.6	36.0	41.3	41.9
Germany	42.0	29.7	34.9	35.2	29.4	35.4	35.5	29.9	34.5	34.8
Estonia	40.0	40.2	47.2	46.6	48.6	57.5	59.4	32.2	37.7	34.9
Ireland	60.0	51.4	56.3	55.9	56.7	60.4	60.4	46.0	51.7	50.9
Greece	32.0	28.6	44.3	43.6	31.1	51.3	50.4	26.2	37.5	36.6
Spain	44.0	42.0	42.4	44.4	47.5	48.6	50.6	36.7	36.1	38.1
France	50.0	43.2	46.2	47.3	47.2	51.2	52.2	39.0	41.0	42.1
Croatia	35.0	24.5	34.1	34.3	27.6	41.9	42.0	21.6	26.5	26.8
Italy	26.0	19.9	27.8	27.5	24.2	34.0	33.4	15.6	21.7	21.7
Cyprus	46.0	45.3	57.1	58.2	48.9	64.4	66.7	41.3	49.2	49.3
Latvia	34.0	32.6	42.7	43.4	41.5	55.2	54.7	23.7	30.6	32.6
Lithuania	48.7	43.8	57.6	57.6	50.8	68.2	68.1	36.4	47.5	47.6
Luxembourg	66.0	46.1	56.2	56.5	47.4	59.8	57.5	44.8	52.5	55.5
Hungary	34.0	26.1	33.7	33.9	30.8	40.5	40.5	21.4	27.3	27.5
Malta	33.0	22.1	34.7	36.9	23.8	37.7	43.7	20.6	32.2	31.0
Netherlands	40.0	41.4	49.4	50.1	44.2	52.6	54.1	38.6	46.2	46.1
Austria	38.0	23.4	40.7	42.3	24.4	44.2	45.6	22.3	37.2	39.0
Poland	45.0	34.8	45.7	46.6	40.4	55.5	56.4	29.5	36.3	37.2
Portugal	40.0	24.0	33.5	35.5	29.9	42.5	42.5	17.9	24.1	28.3
Romania	26.7	18.3	24.6	25.4	19.2	28.1	29.0	17.5	21.4	22.0
Slovenia	40.0	34.8	42.7	43.7	44.0	56.3	55.3	26.4	31.6	33.9
Slovakia	40.0	22.1	37.7	39.8	26.2	44.6	47.8	18.2	31.1	32.2
Finland	42.0	45.7	44.2	46.6	54.0	52.5	55.8	37.7	36.2	38.0
Sweden	45.0	45.3	51.8	52.3	51.1	59.0	59.6	39.8	45.0	45.4
United Kingdom	43.1	43.1	48.8	49.1	45.1	52.0	52.4	41.0	45.5	45.7

Source: compiled on the basis of Eurostat data.

An analysis of statistical data shows that in 2019 18 countries achieved their targets, including Poland. Two countries, i.e. Croatia and Hungary, approached their national targets by less than one percentage point. When looking at the EU States in terms of tertiary education it can be observed that the countries of Northern and Central Europe are leading in this respect (given that 19 countries exceeded the general EU target of 40%). The lowest levels of the indicator in question were noted for Romania (25.4%) and Italy (27.5%). In turn, the greatest increase (almost two-fold) of the percentage of people aged 30-34 who have completed tertiary or equivalent education in 2010-2019 was noted for Slovakia, Malta and the Czechia. An increase in the level of tertiary education throughout the EU results primarily from investment that the EU countries undertake for tertiary education and from the reformed Bologna Process (which concerns mainly the two-cycle system of tertiary education and shorter degree programmes).

What is interesting, statistical data shows that in the EU countries the difference between sexes among persons with tertiary education increases to the benefit of women. What is important - from the point of view of global economy - the general trend shows an increase in the share of population who have completed tertiary education in the last decade (thus it is not a trend characteristic only to the EU).

4. Conclusion

The assumptions included in the Europe 2020 strategy both directly and indirectly refer to human capital. This is largely determined by challenges that the European Union must face, mainly the aging and decreasing of the European resources of the labour force, an increase of innovation in all fields of economy, the need to ensure resources of qualified labour force, an increase in performance - a factor allowing future economic growth. The above issues are extremely important since according to statistical prognosis until 2050 the EU population in active age will decrease by approximately 10% (25 million), whereas the number of people not active on the labour market will increase by 20%. Therefore, all possible actions need to be taken aimed at raising the level of the quality of the human capital in the EU, which entails i.a. ensuring an adequately high level of education in the countries of the community, making sure that the percentage of educated people is growing, that the percentage of young people leaving education early is decreasing and that the percentage of people participating in lifelong learning is growing.

The analysis carried out in the paper shows that implementation of the provisions of the Europe 2020 strategy will not eliminate the existing differentiation in the area of education in the EU-28 countries. Individual EU Member States vary in economic, social and cultural terms. For each of these countries the level from which they began the implementation of the Europe 2020 strategy is different and so are the set target values possible to be achieved in the outlined time span. It seems that compared to aims put forward in the Lisbon Strategy the targets put forward in the Europe 2020 strategy, especially those concerning the education sector, will be mostly met. However, the following still need some reflection: what actions need to be taken within the EU in the future to boost the quality of human capital? What actions need to be taken in order to encourage young people to invest in education, to continue education at a higher level? What can be done to decrease the percentage of the NEET generation in the EU? What actions need to be taken in order to eliminate, or in the worst case minimize, the existing diversity in the area of education in the EU-28 countries?

These are questions for which answers should be sought when constructing further legal acts or strategies, especially in the sphere of education in the EU. Naturally, these are also questions that the paper's Author is concerned about and for which she will try to find answers in her research.

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What the Future Managers Have in Common? The Simply Key: Cross-Cultural Leadership

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Abstract

The question of what leadership is and how to best practice it has been discussed and debated for centuries. The meaning and power of leadership derives at least in part from the culture from which it is drawn. Early social science leadership research did not recognize this and it sought to identify universal traits or competencies possessed by all leaders. However, starting in the mid-1960s, research on the situational determinants of leadership, i.e. the contextualized approach to leadership, has grown and this approach appears viable. In this paper, the evidence concerning one such contextual variable, societal culture is reviewed. The traditional cross-cultural literature shows how culture affects the kind of leadership characteristics, attributes, and behaviours desired and believed to be important in a society. The research also shows that culture moderates the outcomes resulting from different styles of leadership. The newly emerging global leadership literature focuses on leadership when followers are culturally diverse.

Keywords: cross-cultural leadership, culturally diverse, future manager, societal culture

JEL Classification: O10, O22, O52, R58

1. Introduction

A leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say: we did it ourselves (Lao Tzu, circa 500 before Christ). If your actions inspire others to dream more, learn more, do more, and become more, you are a leader (John Quincy Adams). The ear of the leader must ring with the voices of the people (Woodrow Wilson).

With the march of globalization and internationalization growing louder and stronger, few successful businesses can now escape the need to work across cultures. Today's leaders need to be adept at leading and managing people of different cultures; they need to listen to the „voices of the people“ as well as understand what those voices may actually be telling them. This in essence is the crux of the challenge; when people perceive the world, communicate and view their leaders in different ways, the leader's ears may be ringing with misunderstood messages. The leader will come across cultural issues in many different guises.

Leadership is not a property of an individual, although some individual traits affect it. Rather, leadership is an asymmetric influence process that arises when two or more individuals interact (Vroom and Jago, 2007). Specifically, while all interacting individuals influence each other, the leader has greater influence than the others. Leaders influence the attitudes, motives, behaviours, and value saliency of followers to facilitate the group's success and effectiveness (House et al., 2014).

The leadership style that emerges within an interaction depends upon various situational factors. Early theories emphasized follower expertise level and the degree of task structure as determinants of leadership style effectiveness (Vroom and Jago, 2007). More recent work has discussed the importance of the medium (i.e. face-to-face versus virtually) through which individuals interact (Mitchell and Towler, 2014; Schmidt, 2014) as well as organizational/societal culture. Indeed, societal culture can be a powerful factor that shapes who is seen as a leader and which leaders are effective (Hanges et al., 2016). The paper aims to explain the numerous aspects of leadership with respect to dimensionality of concept.

2. Cross-Cultural Leadership: Phenomena around the World

For most of us, we have developed our leadership skills in a workplace based on our own culture. We make assumptions that people “just know” what is expected of them. But there are many different approaches to communication and interaction. These in turn are influenced by the culture in which we were raised.

Cross-Cultural Leadership requires that managers recognize these differences. And further, that they put processes in place to help people work together effectively. And it is not just about helping people from other cultures to adapt to our existing culture. It goes much further to integrate the entire workplace (“old” and new).

Many people associate culture with different appearance (colour, size, etc). Additionally, we look at differences in languages, religious practices, food, music and clothing. But these outward appearances can be misleading. And often, have little significance compared to real cultural differences. These real differences are based on different beliefs and values. These beliefs and values drive our behaviour – both consciously and unconsciously. Cross-Cultural Leadership requires the ability to recognize, analyse and influence behaviours in positive way. As with any management and leadership competency, Cross-Cultural Leadership requires a combination of approaches. Professional development needs to be based on these 3 pillars:

- **Knowledge:** First, we need new knowledge about cultural differences. We need to understand how culture develops. How does it impact people’s behaviour and performance in the workplace?
- **Self-Awareness:** Second, we need a deep self-awareness of our own cultural conditioning (beliefs and values). We all have it, but often aren’t aware of it. But once we recognize it, we can then choose to act differently.
- **Application:** Third, this knowledge and self-awareness needs to be applied. By definition, a competency is a demonstrated skill. So, while we can start with some case studies and exercises, we must eventually take this into the real world.

While there is much written about the concept of Cross-Cultural Leadership, managers also need the practical tools for day to day management. That is – how to implement Cross Cultural Leadership in the business units?

There are many benefits to intercultural awareness training for people at all levels and positions in an organization. But at minimum level, it is useful to pay attention on developing cross-cultural skills for managers based on the following five steps:

1. Develop knowledge about the dimensions of culture.
2. Understand the dynamics of diverse groups and team.
3. Assess own cultural conditioning.
4. Develop new skills in cross-cultural communication.
5. Develop and implement specific business practices and tools.

3. Changing Role and Position of a Manager Nowadays

Today, we believe that the problem in most organizations isn't simply that management is inefficient, it's that the role and purpose of a "manager" haven't kept pace with what's needed (Pistrui and Dimov, 2018). For almost 100 years, management has been associated with the five basic functions outlined by management theorist Henri Fayol: **planning, organizing, staffing, directing, and controlling**.

These have become the default dimensions of a manager. But they relate to pursuing a fixed target in a stable landscape. Take away the stability of the landscape, and one needs to start thinking about the fluidity of the target. This is what's happening today, and managers must move away from the friendly confines of these five tasks. To help organizations meet today's challenges, managers must move from the past to the future.

- **Directive to instructive:** When robots driven by artificial intelligence (AI) do more tasks like finish construction or help legal professionals more efficiently manage invoices, there will be no need for a supervisor to direct people doing such work. This is already happening in many industries – workers are being replaced with robots, especially for work that is more manual than mental, more repetitive than creative.
- **Restrictive to expansive:** Too many managers micromanage. They don't delegate or let direct reports make decisions, and they needlessly monitor another people's work. This tendency restricts employees' ability to develop their thinking and decision making – exactly what is needed to help organizations remain competitive.
- **Exclusive to inclusive:** Too many managers believe they are smart enough to make all the decisions without the aid of anyone else. To them, the proverbial buck always stops at their desks. Yet, it has been our experience that when facing new situations, the best managers create leadership circles, or groups of peers from across the firm, to gain more perspective about problems and solutions.
- **Repetitive to innovative:** Managers often encourage predictability – they want things nailed down, systems in place, and existing performance measures high. That way, the operation can be fully justifiable, one that runs the same way year in and out. The problem with this mode is it leads managers to focus only on what they know – on perpetuating the status quo – at the expense of what is possible.
- **Problem solver to challenger:** Solving problems is never a substitute for growing a business. Many managers have told us that their number one job is "putting out fires," fixing the problems that have naturally arisen from operating the business. We don't think that should be the only job of today's manager. Rather, the role calls for finding better ways to operate the firm – by challenging people to discover new and better ways to grow, and by reimagining the best of what's been done before. This requires practicing more reflection – to understand what challenges to pursue, and how one tends to think about and respond to those challenges.
- **Employer to entrepreneur:** Many jobs devolve into trying to please one's supervisor. The emphasis on customers, competitors, innovations, marketplace trends, and organizational performance morphs too easily into what the manager wants done today – and how he or she wants it done. Anyone who has worked for "a boss" probably knows the feeling.

It is required that managers must become truly human again: to be people who love to learn and love to teach, who liberate and innovate, who include others in the process of thinking imaginatively, and who challenge everyone around them to create a better business and a better world. This will ensure that organizations do more than simply update old ways of doing things with new technology, and find ways to do entirely new things going forward.

4. How to Become A Successful Cross-Cultural Leader? Principles of the Future Manager

Today's businesses are complex entities. However, one fundamental principle of success remains constant – the need for communication. Communication manifests in various forms, both verbal and non-verbal. One area of increasing concern for businesses is how to nurture and maintain effective intercultural communication between employees. As workforces become increasingly multicultural and businesses continue to expand overseas, the homogenous workforce has become a thing of the past. The cultural diversity of businesses necessitates that internal communication now takes note of the intercultural element if it is to be truly effective. Management today have to ensure that they are understanding and being understood across cultural boundaries. The following principles are meant to provide a starting point to managers dealing with culturally diverse teams (Figure 1).

The most successful cross-cultural leaders demonstrate a desire to understand differences and a willingness to be flexible. There are many stories about a leader from one country who failed spectacularly to achieve expected results, because their fit with the new country's culture hadn't been considered. Developing an understanding of differences, whilst reserving any automatic (bias-led) judgment, requires dedicated effort from even the most skilled practitioners in global organisations. Particularly as leaders simultaneously need to be attuned to their own leadership style, so they can consciously prepare to flex it when appropriate. A leader's style is influenced by three things:

- Their own individual personal style and experience
- The expectations and corporate culture of their employer organisation
- Their national identity's background culture(s).

Successful cross-cultural leadership is far too complex to be simplified into a basic equation, but what would it look like if we were to try?

Most large organizations today are looking for leaders who can easily and effectively move between countries and cultures, taking on expat assignments, understanding disparate markets, and managing diverse teams. Where can they find such talent?

The advice could be to look to a group of people called “**global cosmopolitans**” – highly educated, multilingual professionals who have already lived, worked, and studied for extensive periods outside their home regions. Whether their international exposure started in their childhood or later, as a result of relocation for education or work, these people often possess five key characteristics that leave them better equipped to tackle complex challenges than their less-global peers:

- They consider change as normal, positive, and a source of opportunity.
- They rely on creative, outsider thinking and adaptation to confront new situations.
- They are able to reinvent themselves and experiment with new identities and settings.
- They become experts at the subtle and emotional aspects of transition.
- They easily learn and use new ways of thinking, taking risks that lead to self-efficacy.

Global cosmopolitans don't need training in cultural competence. They have already developed an awareness of their own cultural worldview, a positive attitude toward cultural differences, knowledge of different cultural practices and the ability to understand and communicate with people whose backgrounds differ from their own.

Managers of the future are going to have to challenge the traditional ideas of management and push back against the many business practices that are outdated and no longer relevant. They will have to adapt to the future employee, which means new ways of working and thinking about work. In speaking with managers, many of them acknowledge that things are changing yet they aren't sure what those changes look like or what kind of a manager they should strive to become. Managers are having to change the ways in which they lead and in fact are having to become leaders. Figure 1 shows principles or characteristics that managers will and must possess going forward.

Figure 1: 10 Principles of the Future Manager



Source: Morgan (2014a,b); own elaboration (2020)

Is a leader

There has long been a distinction between managers and leaders. Managers were the dictators and leaders were the visionaries. Going forward a manager must be a leader, that is, he or she must earn followers and not command respect. Being a manager is something you earn not something you are assigned to do. A manager cannot be someone placed in a position of power simply because they bring in the most money or are the best at delegating.

Follow from the front

This concept is all about the manager's responsibility to remove obstacles from the paths of employees. A manager exists to make his people more successful not to have his or her people serve them. When a manager follows from the front he paves the way and enables team members to become successful.

Understand technology

Managers don't need to become experts at every new technology that comes their way. However, now that technology has become such a crucial part of how we live and work it has never been more important for managers to grasp which technologies have the potential to benefit the organization and which new technologies might be coming their way in the near future. A manager must keep a good pulse on technology.

Leads by example

A manager must be the first person to demonstrate a new behaviour, to support a relevant technology, or to embrace a new concept. A manager cannot lead by delegating and ordering, a manager can only lead by demonstrating; they are the guinea pigs, the ones on the front line, and the ones who will help drive change.

Embraces vulnerability

A manager needs to be ok with asking for help, admitting when they are wrong or when they don't know something, and will feel comfortable when team members ask questions and voice their opinions even though they may contradict theirs. Embracing vulnerability is what leads to innovation, it's about bringing down the stereotypical façade that managers are supposed to have (being robots) and being people. We are already talking about robots replacing many human jobs, let's not jump the gun by having managers act like "human" robots. Managers must be people.

Believes in sharing and collective intelligence

A manager understands and embraces the fact that they may not have all the answers or make the best decisions nor should they want or be expected to. A manager knows that it is far more effective to rely on the collective intelligence of a team instead of the directions of one. This manager also acknowledges the benefit and value in sharing information instead of hoarding it; something that is largely being made possible with collaborative technologies.

Is a fire starter

Managers are oftentimes credited with having to "put out fires," but their role should be the exact opposite! Managers should be fire starters; that is sparking ideas, challenging convention, and experimenting.

Gives real time recognition and feed-back

Any manager worth their weight in salt knows that annual reviews are not effective for either the organization or the team members. Instead managers will focus on providing their team with real time feedback and recognition through collaborative technologies and platforms and through regular, short, periodic check-ins instead of multi-hour-long reviews.

Is conscientious of personal boundaries

A manager recognizes that team members have their own space, both digitally and physically. This means respecting those boundaries and being aware of when it is appropriate to "friend" someone through social channels, if/when it's ok to schedule a 6am meeting or a 10 pm presentation, or if it's ok to send emails or projects through on the weekends or during vacation time. With our ability to always stay connected managers must remember that connectivity doesn't always imply availability. A manager must work towards setting expectations that boundaries exist and are respected.

Adapts to the future employee

Managers understand that the way we work and think about work is changing. This means they are open minded and accept change, in fact they encourage it and help drive it. Managers pay attention to the principles of the future employee and they make changes to accommodate. Managers who stay in an "old way of thinking" will unfortunately be replaced as nobody will want to work for them.

5. Conclusion

Project management has become a core competency, and nearly every manager is involved in managing one or more projects. Moreover, the role of projects in organizations is receiving increasing attention (Staničková, 2016). The role of project managers seems to be very misunderstood throughout the world. Because many project managers arrive at their positions as a natural progression from their jobs as engineers, programmers, scientists, and other kinds of jobs, both they and their bosses see the job as technical. This simply isn't true. Every project produces a product, service, or result, then there is a technical aspect to the job. However, it is a question of who is responsible for what, and project managers who must manage the project and handle technical issues are set up to fail from the beginning. The primary responsibility of the project manager is to ensure that all work is completed on time, within budget and scope, and at the correct performance level. As mentioned Heagney (2016), the project manager role is to manage the project, not do the work!

Global leadership scholars introduced a new question into this literature. What should a leader do when followers from different cultures have to work together to solve a common task in an ambiguous, complex, and diverse work context? This literature has focused less on behaviors and more on leader competencies/mindsets needed to enhance leader cultural agility so that a shared vision and functional team procedures can be developed. Global leadership is emerging as a critical issue because new environmental (i.e. globalization), technological (allowing simultaneous task input from different sources and virtual meetings), and competitive pressures have created a context not previously seen (Hanges et al., 2016).

The majority of the traditional cross-cultural leadership literature has focused on cognitive aspects of leadership. This is insufficient. Emotions play an important role in any relationship and so it is reasonable for them to play a role in the leader-follower relationship as well. This construct is not systematically studied in the traditional cross-cultural leadership literature and only somewhat acknowledged in the global leadership literature (e.g., such leaders need emotional intelligence). Future re-search should investigate the role that emotions play cross-culturally in leader-follower interactions. What limits does culture place on the range of permissible emotion-related leader behavior? Does culture moderate follower consequences of leader emotion-related behavior (passion for vision). How do leaders use emotion to facilitate team development of culturally diverse followers?

Another avenue for research concerns how international leaders effectively balance both domestic and global leadership behaviors. The literature argues that effective global leaders repeatedly switch between domestic to global mindsets as a function of contextual requirements. What contextual triggers signal the global leader to switch one mindset to another? What is the process by which global leaders facilitate the melding of international followers into a common group?

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Transaction Costs Role in Export Price - Comparison of EU and the Western Balkan Countries

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Abstract

Enlargement to the Western Balkans is one of the strategic interests of the EU. Accession negotiations are underway with Serbia and Montenegro, Northern Macedonia and Albania are waiting for opening of accession negotiations and Kosovo with Bosnia and Herzegovina have the status of potential candidates. However, the Western Balkan countries still achieve low level of competitiveness. The article is based on transaction costs theories, coming mainly out of the work of Coase and Williamson, evaluates transaction costs, as part of export price, in the context of logistics in EU and Western Balkans countries. We used a managerial model of the hypothetical export price structure based on a Transaction Cost Matrix to determine the structure and size of transaction costs in export price. Using regression analysis, we monitored the dependency of selected business environment indicators, determined from the Global Competitiveness Index, and their impact on the cost to export 1 TEU container

Keywords: contracts, EU, enlargement, export, transaction costs, Western Balkans

JEL Classification: F60, L91, R40

1. Introduction

The relationship between the European Union and the countries of the Western Balkan is currently in the process of association and stabilisation (Kittová and Steinhäuser, 2018). This process is based on stabilisation and association agreements (Kašáková and Ružeková, 2019). The assessment of the Western Balkan countries, conducted by the European Commission (2018, s. 2), indicates low level of economic competitiveness and none of the Western Balkan countries can be considered a functioning market economy.

According to institutional and evolutionary economics, development and economic growth and are closely related to the transaction costs (North, 1991). Well-functioning economies have a lower level of transaction costs and a higher quality of institutional environment (Kittová, Steinhäuser, 2017). Institutional quality reduces transaction market costs, which leads to immediate, but short-term economic growth, while increase of institutional flexibility leads to consistent growth (Svoboda, 2018). Transaction costs are one of the most fundamental determinants of the market exchange (Coase 1988, 2007, North 1991, Williamson 1996, 1985), however they are always difficult to measure.

The objective of the article is to evaluate and determine the size and the structure of the transaction costs in export prices within the EU 27 countries, United Kingdom, Switzerland,

Norway, Iceland and Western Balkan countries and analyse them in the context of the integration ambitions of the countries of the Western Balkans and their business environment.

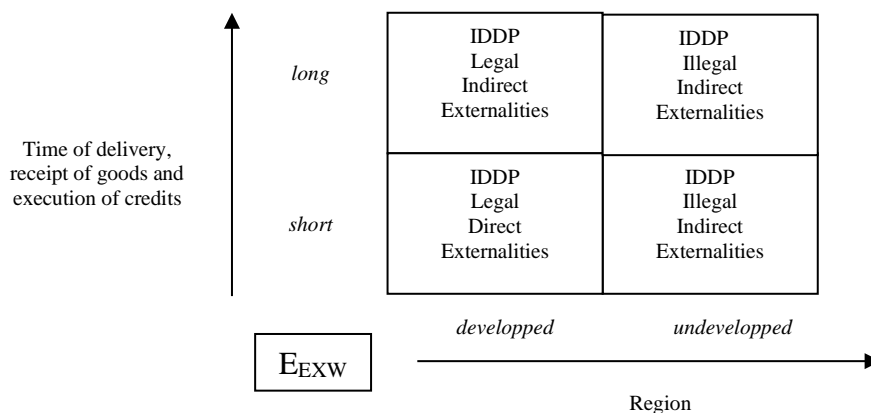
Basis of our research is the Doing Business database input for the cost to export 1 TEU (twenty-foot equivalent unit) container. Export price of 1 TEU container is the basic handling unit in intermodal and multimodal operations that are modern business solutions for logistics without the need for physical goods handling using the latest technologies that can be observed in industry 4.0 or logistics 4.0. These solutions require existence of modern intermodal transport terminals, e.g. ports.

There are several seaports in the Western Balkans region. The most important are Koper in Slovenia, Rijeka and Split in Croatia, Port of Bar in Montenegro or port of Durrës in Albania. If we look more closely, for example at the Port of Bar in Montenegro, it can be argued that it currently does not show a high intensity of trading operations, but it has large potential for developing multimodal trading operations, given that it has a RO-RO terminal (Roll-on/roll-off terminal), Container Terminal, General Cargo Terminal, Bulk Cargo Terminal and also Liquid Cargo Terminal. It is assumed that after Montenegro's accession to the European Union, there will be an increase in the intensity of trade between the EU and Montenegro, eventually other countries in the region. The role of these ports as terminals of intermodal and multimodal transport is likely to increase, as the road and railway infrastructure linking the Western Balkans region to the EU is insufficient.

2. Problem Formulation and Methodology

Our research is based on the Coase's and Williamson's theories that the contractual costs being the largest costs in the process of doing the international business and also on the managerial model of the hypothetical export price structure and the Transaction Costs Matrix which has the following form (Figure 1):

Figure 1: Transaction Costs Matrix in Exports and Imports



Source: Hansenová et al. (2012)

To achieve the objective of this study, we had to verify the hypotheses we had formed and to evaluate the importance of the logistics method of the containerization in terms of the export costs of 1 TEU container obtained from DB 2015 (the Doing Business 2015 report) that

contains the latest data available for the countries in the analysis. For the purpose of this research, we have created a database for the analyzed 36 European countries in terms of the quality of the business environment determined by selected indicators of GCI 2012-2013 (the Global Competitiveness Index 2012-2013). We suppose that there is a time lag between the level of the quality of business environment and the costs to export 1 TEU container.

We came out of the idea of a managerial model of the hypothetical export price structure based on the Transaction Costs Matrix. The Transaction Costs Matrix (Figure 1), apart from direct legal costs, also includes indirect and illegal costs and externalities: time, bribes, conflicts (forensic processes), social responsibility or speed of change, too. Its main benefit is that the traditional and formalized value measurement methods currently in use do not outweigh the actual costs that the final consumer has to bear. The Matrix is based on the idea of the managerial model of hypothetical export price structure (Table 1).

Table 1: The Managerial Model of the Hypothetical Export Price Structure

FACTORY PRICE / PROCUREMENT PRICE

LEGAL DIRECT TRANSACTION COSTS
Costs of making and controlling contracts
Delivery costs according to the Incoterms
Financial costs
Risk costs
Costs of information
Costs of knowledge
Costs of ethics
Environmental costs
COSTS OF EXTERNAL ADMINISTRATION
ILLEGAL TRANSACTION COSTS
EXTERNALITIES

LEGAL INDIRECT TRANSACTION COSTS: TIME COSTS OF OWNERSHIP
TRANSFER OF GOODS BY ROAD

TOTAL COSTS OF EXPORTER
PROFIT (MARGIN)

Source: H. Hansenová et al. 2012

Based on the previous export price structure, we have selected 8 indicators from Global Competitiveness Index such as the extent of marketing, soundness of banks, business costs of crime and violence, firm-level technology absorption, extent of staff training, ethical behavior of firms, quality of overall infrastructure and the burden of custom procedures completed by the export price of 1 TEU container of each of the 36 European countries. We assume that the amount of costs to export 1 TEU container depends on the quality of the business environment, in our case defined by selected indicators. The following Table 2, Table 3 show the link between the cost items and the indicators which we selected.

Table 2: Relation between the Global Competitiveness Index Indicators and the Costs items in the Hypothetical Export Price Structure

Indicators		Costs items
Relation	Soundness of Banks	Financial Costs
	Price of financial instruments (forfeiting, factoring, letter of credit, bank guarantees, bank accounts, smart banking, etc.) and value of financial capital in circulation depending on the interest rates.	
Relation	Firm Level Technology Absorption	Costs of Information
	IT investment and IT management maturity.	
Relation	Ethical Behavior of Firms	Costs of Ethics
	Ethical behavior of firms, corruption or clientelism. Within this category, negative externalities arise for companies that adopt ethical principles. The problem is that it often happens that an unethical company does not act against the law and therefore it is not possible to punish such behavior under the law.	
Relation	Quality of Overall Infrastructure	Environmental Costs
	Quality of the overall infrastructure. The infrastructure may include transport infrastructure (eg. ports, airports, highways, railways, etc.), technical infrastructure (electricity grids, sewerage, gas pipelines, telephone, mobile and Internet networks, etc.) and green infrastructure. The importance of infrastructure also lies in the management, maintenance and development of societal requirements and the physical world to enable the transport of everything and everywhere.	

Source: Own processing

Our regression model of dependence of the quality of the business environment on the costs to export 1 TEU container is based on the 4 independent variables determined with the indicators such as: extent of marketing, business costs of crime and violence, burden of customs procedures and extent of staff training (Table 3).

We originally used the OLS estimator in Gretl statistics program with the aim to create our model, but in its test for the presence of heteroscedasticity by the White's test, we found that it was present in the model with 95 % probability which we could observe at a p – value $< 0,05$. On this basis, we continued testing and changed the OLS estimator to the heteroscedasticity corrected estimator, keeping the homoscedasticity condition because p – value $> 0,05$. Within models, the presence of a constant is recommended by default, but we have excluded it to maintain the significance of the variables tested within the model. The resulting model of the dependence of quality or poor quality of the business environment, defined by GCI indicators, on the costs to export 1 TEU container for EU 27, United Kingdom, Switzerland, Norway, Iceland and Western Balkan countries. The idea is based on the comparison of how could change the structure of the transaction costs in export price if the Western Balkan countries would integrate in the EU and the situation when these countries are not integrated. The regression models of the transaction costs structure has the form shown in the next section of this article in Problem Solution and Conclusion.

Table 3: Relation between the Global Competitiveness Index Indicators and the Costs Items in the Hypothetical Export Price Structure - Continue

Indicators		Costs items
Relation	Extent of Marketing	Costs of Making and Controlling Contracts
	Through the operation related to creation of the credibility, pairing subjects in contracts, marketing, information necessary for the control and management of contract, contract enforcement such as court and other proceedings and settlements (credibility is considered as bounded rationality and opportunism both developed in game theory) and certain technologies of good contracting - according to Williamson	
Relation	Business Costs of Crime and Violence	Risk Costs
	All types of known and potential risks (risk management costs).	
Relation	Extent of Staff Training	Costs of Knowledge
	Investments in the efficiency and effectiveness of human capital measured by a number of innovations and training, education system, foreign language skills, etc.	
Relation	Burden of Custom Procedures	Costs of External Administration
	We identified administrative costs with the burden of customs barriers. The more and more intensive customs barrier are applied, the more difficulties to overcome. The complexity itself can be quantified by the amount of administrative costs in export-import operations.	

Source: Own processing

3. Problem Solution

The research in this paper is based on the idea of our previous research activity aimed at creating a regression model of the dependency of the costs to export 1 TEU container on the quality of the business environment, given by indicators of the Global Competitiveness Index extent of marketing, business costs of crime and violence, extent of staff training and burden of custom procedures, for the EU 28 countries. The equation of linear regression is presented in the Table 4.

Table 4: The Linear Regression Equation

\hat{y}_i	B		x_i
Predicted_Costs_to_Export_1_TEU	+	2479,83	ln_Extent_of_Marketing
	+	1264,13	ln_Business_Costs_of_Crime_and_Violence
	-	1688,23	ln_Burden_of_Custom_Procedures
	-	1659,36	ln_Extent_of_Staff_Training

Source: own processing

This article deals with the creation of a regression model but the focus of which will be on the same countries EU 27 and United Kingdom, extended with Switzerland, Iceland, Norway and the Western Balkan countries like Serbia, Montenegro, Bosnia and Herzegovina, North Macedonia and Albania (Table 5). The main idea was to compare and identify how the model would change, if these countries would integrate in the EU.

Table 5: Model: Heteroskedasticity-Corrected, Using Observations 1-36, Dependent Variable: Cost_to_Export_1_TEU_in_2015_in USD

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
l_Extent_of_marketing	1899,64	402,938	4,714	<0,0001	***
l_Business_costs_of_crime_and_violence	1527,91	185,436	8,240	<0,0001	***
l_Extent_of_staff_training	-1661,09	372,631	-4,458	<0,0001	***
l_Burden_of_custom_procedures	-1367,17	252,388	-5,417	<0,0001	***
Statistics based on the weighted data:					
Sum squared resid	86,44699		S.E. of regression	1,643614	
Uncentered R-squared	0,571590		Centered R-squared	0,961825	
F(4, 32)	10,67370		P-value(F)	0,000013	
Log-likelihood	-66,85001		Akaike criterion	141,7000	
Schwarz criterion	148,0341		Hannan-Quinn	143,9108	
Statistics based on the original data:					
Mean dependent var	1101,000		S.D. dependent var	301,0453	
Sum squared resid	3016919		S.E. of regression	307,0484	

Test for normality of residual -

Null hypothesis: error is normally distributed

Test statistic: Chi-square(2) = 6,93136

with p-value = 0,0312518

Legend: * 90 % probability, ** 95 % probability, *** 99 % probability

Source: own processing

The equation (Table 6) which we obtained from the model tells us the following: if the indicator of Extent of Marketing (which determines the quality of the business environment) would have increased by 1 percent and assuming unchanged the rest of the indicators involved in the regression model - Business Costs of Crime and Violence, Burden of Custom Procedures and Extent of Staff Training - the costs to export 1 TEU container within EU 27 countries, United Kingdom, Switzerland, Iceland, Norway and the Western Balkan countries like Serbia, Montenegro, Bosnia and Herzegovina, North Macedonia and Albania increase by 1899,64

USD. This coefficient of the variable of Extent of Marketing is different from the coefficient of the same variable in the regression model which we created before exclusively for the EU 28 countries. The difference is approximately 580 USD, which means that if the Western Balkan countries were part of the part of the space defined as EU 27, United Kingdom, Switzerland, Norway and Iceland, and if the indicator Of Extent of Marketing would increase by 1 percent, assuming unchanged the rest of the rest of the indicators involved in the regression model, the costs to export 1 TEU container within the analysed countries would also have increased, but this growth would have been weaker by about 580 USD as if only the EU 28 were taken into account. This means that in these countries, we can see a weaker quality of the business environment determined by the extent of marketing.

Table 6: The Linear Regression Equation

\hat{y}_i		B	x_i
Predicted_Costs_to_Export_1_TEU	+	1899,64	ln_Extent_of_Marketing
	+	1527,91	ln_Business_Costs_of_Crime_and_Violence
	-	1661,09	ln_Extent_of_Staff_Training
	-	1367,17	ln_Burden_of_Custom_Procedures

Source: own processing

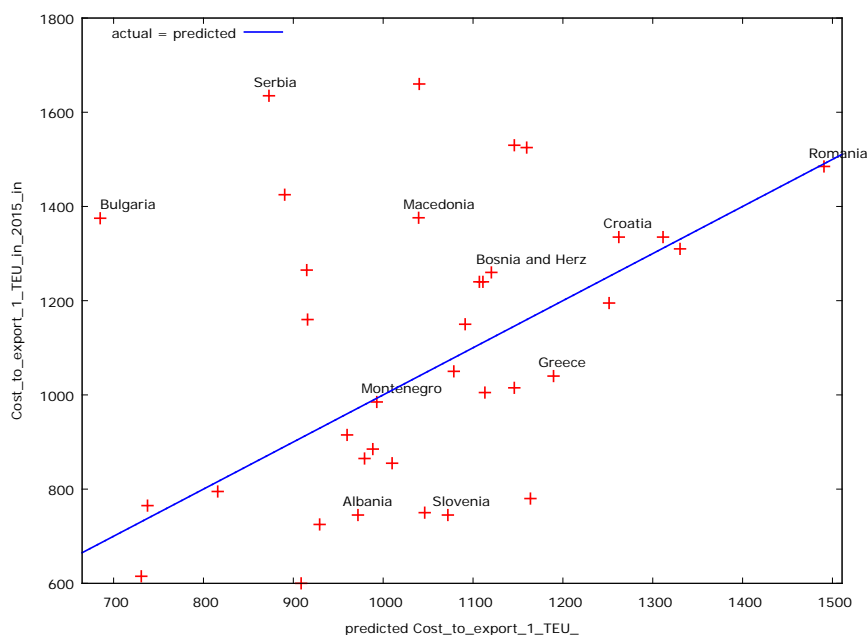
The indicator of Business Costs of Crime and Violence (which determines the quality of the business environment) is interesting, too. If it would have increased by 1 percent and assuming unchanged the rest of the indicators involved in the regression model – Extent of Marketing, Burden of Custom Procedures and Extent of Staff Training - the costs to export 1 TEU container within the same countries increase by 1527,91 USD. This coefficient of the variable of Business Costs of Crime and Violence is different from the coefficient of the same variable in the regression model which we created before exclusively for the EU 28 countries. The difference is approximately 260 USD, which means that if the Western Balkan countries were part of the part of the space defined as EU 27, United Kingdom, Switzerland, Norway and Iceland, and if the indicator Of Business Costs of Crime and Violence would increase by 1 percent, assuming unchanged the rest of the rest of the indicators involved in the regression model, the costs to export 1 TEU container within the analysed countries would also have increased, but this growth would have been stronger by about 260 USD as if only the EU 28 countries were taken into account. This means that in the Western Balkan countries, we can see a weaker quality of the business environment determined by the business costs of crime and violence.

If the indicator of Extent of Staff Training (which determines the quality of the business environment) is increased by 1 percent and assuming unchanged the rest of the indicators involved in the regression model – Extent of Marketing, Business Costs of Crime and Violence and Burden of Custom Procedures - the costs to export 1 TEU container within the same countries will decrease by 1661,09 USD. There is no significant difference between these two models from our comparison which means that the quality of the business environment determined by the indicator of the Extent of Staff Training in the Western Balkan countries has a good level and can be a future base of the transformation these countries.

If the indicator of Burden of Custom Procedures (which determines the quality of the business environment) is increased by 1 percent and assuming unchanged the rest of the indicators involved in the regression model – Extent of Marketing, Business Costs of Crime and Violence and Extent of Staff Training - the costs to export 1 TEU container within the same countries will decrease by 1661,09 USD. This coefficient of the variable of Burden of custom Procedures is different from the coefficient of the same variable in the regression model which we created before exclusively for the EU 28 countries. The difference is approximately 320 USD, which means that if the Western Balkan countries were part of the part of the space defined as EU 27, United Kingdom, Switzerland, Norway and Iceland, and if the indicator Of Burden of Custom Procedures would increase by 1 percent, assuming unchanged the rest of the rest of the indicators involved in the regression model, the costs to export 1 TEU container within the analysed countries would also have decreased, but this decrease would have been weaker by about 320 USD as if only the EU 28 countries were taken into account. This means that in these countries, we can see a weaker quality of the business environment determined by the burden of custom procedures.

This model served us as a tool to conduct the following analysis for all EU 27 member states, United Kingdom, Switzerland, Iceland, Norway and the Western Balkan countries like Serbia, Montenegro, Bosnia and Herzegovina, North Macedonia and Albania (Figure 2). The following Figure 2 shows us the performance of the Balkan countries with the focus on the Western Balkan countries that deals with the interest of being a member state of the EU. They are represented with Serbia, Montenegro, Bosnia and Herzegovina, Albania and North Macedonia.

Figure 2: Comparison of Actual and Model Costs to Export 1 TEU Container in 2015 for EU 27 Member States, United Kingdom, Switzerland, Norway, Iceland and Western Balkan Countries.



Source: own processing based on the data of World Economic Forum (2012) and World Bank (2015)

Model verification on the example of the Western Balkan Countries: Western Balkan countries' business environment is determined by the indicators from the database of the GCI 2012-2013 which we put into the Table 7. We know that i. Serbia's business environment was determined by 2,9 out of 7 points for the Extent of Marketing index; by 4,6 out of 7 points for the Business Costs of Crime and Violence index; 2,9 out of 7 points for the Extent of Staff Training index and 3,5 out of 7 points for the Burden of Custom Procedures. For better seeing the following table 7.

Table 7: Western Balkan Countries' Data from GCI 2012-2013 and DB 2015

Country	Extent of Marketing	Business Costs of Crime and Violence	Extent of Staff Training	Burden of Custom Procedures	Cost to Export 1 TEU in 2015 in USD
Slovenia	4,10	6,00	3,70	4,90	745,00
Montenegro	4,20	5,50	4,10	4,30	985,00
Croatia	3,80	5,20	3,20	3,90	1335,00
Bosnia and Herzegovina	3,70	5,40	3,50	3,90	1260,00
Albania	4,50	4,70	4,40	3,70	745,00
Serbia	2,90	4,60	2,90	3,50	1635,00
North Macedonia	3,70	5,00	3,10	4,40	1376,00

Source: own processing based on the data of World Economic Forum (2012) and World Bank (2015)

Focus on the Western Balkan countries: When we put these data into our estimation of the linear regression model, we discovered that the costs to export 1 TEU container in the case of Montenegro should have reached around 993 UDS but the real costs to export 1 TEU container in 2015 reached 985 USD. These two numbers are very similar and we can assess that the real quality of the business environment in Montenegro reflected in 2015 the model situation, there were no significant bias.

On the other hand, there is Serbia. The Serbia's costs to export 1 TEU container should have reached around 873 USD but the real costs to export 1 TEU container reached 1635 USD, which means almost the double costs. These two numbers are very far-distant from each other which means that the real quality of the business environment determined by the selected indicators from GCI 2012-2013 should have reflected in the costs to export 1 TEU container. The real situation with the costs to export 1 TEU container is almost 2 times worse, it means that there have to exist some other factors that deteriorate the real performance of the country.

We also chose Albania to analyze due to its lowest real costs to export 1 TEU container. In 2015, the Albanian costs to export 1 TEU container reached only 745 USD what is a better number than in the model situation. According to our regression model the costs to export 1 TEU container should have reached 972 USD which is much worse than the real situation. On

the real performance, they can have impacts also other factors like the access to the sea, the geographical distribution of the partners, other factors of the business environment like Firm Level of Technology Absorption, Ethical Behavior of Firms, Quality of Overall Infrastructure, Soundness of Banks and other reasons. The following Table 8 focuses on the summary statistics.

Table 8: Summary Statistics, Using the Observations 1 – 36

Variable	Mean	Median	Minimum	Maximum
l_Extent_of_marketing	1,5314	1,5041	1,0647	1,8245
l_Business_costs_of_crime_and_violence	1,6853	1,7047	1,3350	1,8563
l_Extent_of_staff_training	1,4232	1,4110	1,0647	1,7228
l_Burden_of_custom_procedures	1,5187	1,5476	1,0986	1,8083
Cost_to_export_1_TEU_in_2015_in_USD	1101,0	1100,0	600,00	1660,0
Variable	Std. Dev.	C.V.	Skewness	Ex. kurtosis
l_Extent_of_marketing	0,17720	0,11571	-0,33044	-0,39299
l_Business_costs_of_crime_and_violence	0,10580	0,062778	-1,0367	1,7105
l_Extent_of_staff_training	0,18519	0,13012	-0,10438	-1,1611
l_Burden_of_custom_procedures	0,14874	0,097940	-0,68394	0,34650
Cost_to_export_1_TEU_in_2015_in_USD	301,05	0,27343	0,094541	-1,1106
Variable	5% Perc.	95% Perc.	IQ range	Missing obs.
l_Extent_of_marketing	1,2246	1,7824	0,27541	0
l_Business_costs_of_crime_and_violence	1,4787	1,8429	0,12376	0
l_Extent_of_staff_training	1,1214	1,6919	0,34963	0
l_Burden_of_custom_procedures	1,2296	1,7203	0,20140	0
Cost_to_export_1_TEU_in_2015_in_USD	612,75	1638,8	525,00	0

Source: own processing based on the data of World Economic Forum (2012) and World Bank (2015)

Testing hypothesis for the variable Extent of marketing:

$H_0: \beta_1 = 0$; $H_1: \beta_1 \neq 0$; $| (1899,64 - 0) / 402,938 | > 2,03693$; $4,7145 > 2,03693$. On this basis, we reject H_0 and claim that the coefficient for Extent of marketing is statistically significant – the quality of the business environment determined by the extent of marketing – affects the costs to export 1 TEU container.

We did the same steps when testing the hypotheses for the rest of the analyzed variables from the model and based on this testing we can argue that all the coefficients for the analyzed variables are statistically significant and they all affect the costs to export 1 TEU container.

Verification of the statistical significance of the model as a whole at the level of significance $\alpha = 0,1$:

H_0 : model is not statistically significant; H_1 : model is statistically significant. The critical value of $F_{0,1}(4,32) = 2,66844$, the calculated F value of the statistics from our model is 10,67370 and since: $10,67370 > 2,66844$, we reject the null hypothesis H_0 , which claims that the regression model is not statistically significant. At the same time, the p-value from our calculations confirm the rejection of the null hypothesis, on the basis of which we confirm the rejection of H_0 and accept the alternative hypothesis H_1 .

Based on the coefficient of determination, which reaches $R^2=0,571590$, we can say that with the regression model with independent variables x_{i1} (extent of marketing for 2012-2013), x_{i2} (business costs of crime and violence for 2012-2013), x_{i3} (extent of staff training) and x_{i4} (burden of custom procedures) we can explain 57,16 % of the variability of dependent variable \hat{y}_i (costs to export 1 TEU container). The remaining 42,84 % of the variability of this variable is due to factors not included in the regression model and random effects.

We also made a prove of the significance of the model with the composite hypothesis testing (F-test) for all analyzed variables and based on it we can argue that we accept all H_1 hypotheses at the level of significance $\alpha = 0,05$, which claim that all tested variables do affect the costs of export 1 TEU container.

The model of dependence of costs to export 1 TEU container on the quality of business environment determined by the extent of marketing, business costs of crime and violence, burden of customs procedures and extent of staff training is statistically significant.

4. Conclusion

The understanding of the importance of the transaction costs in a structured form that attempts to quantify them is based on the development of the regression model of the dependence of the costs to export 1 TEU container on the quality of the business environment. This approach to the topic of the transaction costs in export price is different from many others, since transaction costs have always been difficult to measure.

Based on our previous research where we proved the existence of the relationship between the quality of the business environment of the EU 28 countries, we analyze the importance and the structure of the transaction costs in export price for the Western Balkan countries if they would be a part of the space determined by the EU 27 countries, United Kingdom, Switzerland, Norway and Iceland.

If the Western Balkan countries were part of the space defined as EU 27, United Kingdom, Switzerland, Norway and Iceland, and if the indicator Of Business Costs of Crime and Violence would increase by 1 percent, assuming unchanged the rest of the rest of the indicators involved in the regression model, the costs to export 1 TEU container within the analyzed countries would also have increased, but this growth would have been stronger by about 260 USD as if only the EU 28 countries were taken into account. This means that in the Western Balkan countries, we can see a weaker quality of the business environment determined by the business costs of crime and violence.

If the Western Balkan countries were part of the part of the space defined as EU 27, United Kingdom, Switzerland, Norway and Iceland, and if the indicator Of Burden of Custom Procedures would increase by 1 percent, assuming unchanged the rest of the rest of the indicators involved in the regression model, the costs to export 1 TEU container within the analyzed countries would also have decreased, but this decrease would have been weaker by

about 320 USD as if only the EU 28 countries were taken into account. This means that in these countries, we can see a weaker quality of the business environment determined by the burden of custom procedures.

This model also showed us how EU 27 countries, United Kingdom, Switzerland, Norway, Iceland and Western Balkan countries could be compared with each other in terms of their actual costs to export 1 TEU container and their model situation, with the smallest difference between actual reported and model values of the costs to export 1 TEU container recorded by countries such as The Netherlands, Denmark, France, Estonia, Spain, Poland, Italy, Montenegro and Romania, where the deviation of the real and model states in the positive or negative direction was less than 5 %. This fact can be interpreted in such a way that the settings of the business environment for 2012-2013 had no-deforming effects in relation to the real costs of exporting 1 TEU container in 2015 (time lag). This does not primarily speak about whether the settings of the business environment are appropriate for the country's competitiveness and export performance, it only indicates that if the business environment of these countries is defined by selected variables and their parameters, the costs to export 1 TEU container will be in close proximity to real data. For all other countries, we have seen greater deviations, which means that there are other variables determining their business environment that distort its impact on costs to export in a positive or a negative direction.

The goal of our further research is to identify the impact of other variables, more specifically indicators that would point to the differences in the institutional background of the Western Balkan countries and the EU-27. We will try to emphasize institutional dimension, in terms of factors, affecting the structure and size of transaction costs included in the export price.

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Integration of Immigrants at Local Level in the Czech Republic and the Role of the European Union

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Abstract

The integration of immigrants is one of the key areas of the migration policy. The success of the integration policy in individual European countries is influenced by different experiences with different types of migration. As a consequence of opening the borders after 1989 and developing European integration, also the post-communist countries have gradually become a target country for increasing numbers of immigrants. The aim of paper is show how the policy of the European Union influences the integration of immigrants at local level using the example of the Czech Republic. The paper focuses on factors which determinate the integration policy in the specific regional conditions in the Czech Republic. Conditions for integration of foreigners in the Czech Republic will be analyze in the historical context of development of the Czechoslovak and Czech migration policy. Special attention will be paid to the Centers for the support of the integration of foreigners.

Keywords: *European Union, Integration of foreigners, Integration policy*

JEL Classification: *F50, J15, J61*

1. Introduction

The question of integration immigrants into the major society is highly contemporary topic in current discussion about the impacts of migration. Emphasise on integration characterises changes of migration policy – especially in times of a crises (economic crisis in 2008, or so-called migrant crisis in 2015). Institutions of the European Union (EU) has begun develop measures for the support immigrant integration as one of the key component of the European migration policy. The goal of paper is show how the policy of the EU influences the integration of immigrants at local and regional level using the example of the Czech Republic.

First part of the paper introduces basic theoretical aspects and dimensions of integration and integration policy. Attention will be paid to impacts of increasing criticism towards multiculturalism and to changes of integration policy in western countries. Second part of the paper focuses on priorities of the integration policy in the EU. Main topic not only of this part is the impact of the EU policy on the integration of immigrants – especially on regional and local level in the Czech Republic. The paper will remind several earlier reflections of the local integration policy. New approaches in the integration policy will be introduced based on the government material “The Conception of Integration of foreigners”. Analysis of development and activities of the regional Centers for the support of the integration of foreigners show several new trends in the local integration policy in the Czech Republic and its connection with

an influence of the EU. In parts about Czech migration will be used term “foreigners” in accordance with official terminology in the Czech Republic.

2. Dimensions and Models of Immigrant Integration Policy

The integration of immigrants has economic, social, political and cultural aspects. Koldinská, Scheu and Štefko (2016) remind four basic dimensions of social integration of the immigrants: structural, cultural, interactive and identification. The first of these involves the provision of basic rights and access to main social institutions as labour market or social system. The second dimension represents the acquisition of basic cultural skills and customs of major society. The third level means integration of immigrants into social relationships and the networks of a receiving community. The main feature of the last dimension is characterised is subjective identification with the major society.

Integration indicators could be the measure of successful integration of immigrants. Drbohlav et al. (2010) mention typical indicators of the structural integration – in the socioeconomic area (labour market participation, using of social benefits, incomes, level of housing and education) and in the political area (conditions for family reunification or political rights of immigrants). Demographic behaviour of immigrants or knowledge of language of the majority belong to the measurable indicators of the cultural dimension. The identification dimension is the most difficult to measure. The frequency of mixed marriages could indicate success rate of this dimension. Perception of integration indicators can be more diverse. According to Sargsyan (2018, p. 6), indicators of social integration involve “the feeling of closeness to the host country and language acquisition”.

Integration policy has also various faces that are influenced by various cultural context. Schneider and Cruz (2010) analyzed different perception of integration and assimilation in Europe and in America. In the literature, there are distinguished three basic models of integration of immigrants related especially to the situation in Western Europe in the second half of the 20th century. As the first, the exclusivist ethnic model can be mentioned, which accepted only the temporary stay of international “guest workers”. Assimilation approach as the second from the models expects full adoption of values and culture of the majority. On the contrary, the multicultural model recognizes the right to preserve the cultural differences of the immigrants (Bařša and Bařšová, 2005). However, the variously conceived multicultural policy has become the target of open criticism.

Critical discussions about crisis of multiculturalism in Europe are connected typically with Muslim communities in Europe. Changes of integration policy in Western Europe can be presented on the example of the Netherlands. This country was characterised by strong position of multiculturalism also on the local level. How remind Duyeendak and Scholten (2011), in the beginning of 21st century “an assimilationist turn took place in Dutch integration policy”. Civic turn came here earlier than elsewhere in Europe. This new tendency of the integration policy involves “greater individual responsibility to immigrants”, demanding their integration into “*a liberal European context in which the nation state and its majoritarian culture are privileged*” (Vermeulen, 2019, p. 804). Emphasize on effective individual integration of immigrants has begun also typical feature of the European migration policy.

3. Integration Policy in the Czech Republic and Influence of the EU

So-called migrant crisis has become new milestone in a history of immigration to Europe. As this article is limited by page range and by focusing on the integration of immigrants, it is not

possible to deal with all aspects of this phenomenon (for example a refugee relocation system or EU-Turkey Statement and its impacts). Following part in accordance with declared goal of this article will focus on European integration policy of immigrant. The EU has limited position in the field of integration policy. The Treaty of the Functioning of the European Union determined that competence on integration lies primarily with Member States. However, the EU can provide incentives supporting integration third country nationals residing legally in territories of member states. The EU emphasizes its important role in coordination and stimulating member states' activities in the area of the integration. (The EU Integration Action Plan of Third-Country Nationals, 2016). How Nová (2016) remind, EU adopted the Common Basic Principles for Immigrant Integration Policy in 2004. The Principles for the Immigrant Integration Policy were confirmed in 2014 as foundations of the EU's policy cooperation on integration. In 2011, the Commission suggested a European agenda for the integration of third country nationals. This agenda focuses on the support of economic, social, cultural and political participation by migrants and emphasis the importance of the integration on the local level.

European Commission (EC) introduced new Action Plan on the integration of third country nationals in 2016. This Plan involves several basic areas of integration policy. First of them are predeparture and pre-arrival measures which should prepare immigrants and members of local communities for the integration process. Education, employment and access to basic services such as housing and healthcare belong also between policy priorities. Active participation and social inclusion have become last priority area of EU's Action Plan. EC wants to reach declared goals typically through projects under EU funds – especially under the Asylum Migration and Integration Fund (AMIF). Member States were encouraged to active cooperation in all priority areas (The EU Integration Action Plan of Third-Country Nationals, 2016).

Connection between development of integration policy in member states and strategy of the EU will be demonstrated using the example of the Czech Republic. Czech experience with migration was significantly different in comparison with Western Europe countries. Immigration in the communistic Czechoslovakia was characterised by the state control and by the focusing to other countries from the Easter bloc. After 1989 Czechoslovakia and later the Czech Republic has gradually become a target country for increasing numbers of immigrant. Current work-oriented immigration to the Czech Republic is completely new phenomenon. Continuous increase in the number of immigrants is one of the most typical feature of migration development. Temporary decreases were caused by changes of asylum and immigration laws after 2000, and by consequences of economic crises in 2008 (Drbohlav et al., 2010). The numbers of foreigners with residence permit grew from around 78 000 in 1993 to 595 881 at the end of 2019. The main source countries are Ukraine (145 518), Slovakia (121 278), Vietnam (61 952), Russia (38 207), Poland (21 767) and Germany (21 478) (Czech Statistical Office, Foreigners in the CR – provisional data – quarterly). How show Machyniak (2018), migration has become strong topics for political parties in the Czech Republic.

According to Borkert et al. (2007) the Czech migration policy in the 1990s was „improvisational” without conceptual approach. Drbohlav et al. (2010) also characterises beginnings of the Czech migration policy (up to 1992) as „simultaneously liberal and chaotic“. First migration legislation started to accepted at the beginning of the 90s. In 1992, a new law on foreigners' residence implemented both short-term and permanent residence permit. The residence of foreigners in Czech Republic was new declared by the Act No. 326/1999 Sb. on Residence of the Aliens on the territory of the Czech Republic and partially also by the Act No. 325/1999 Sb. on Asylum. A „foreign national” was defined as a natural person, who is not citizen of the Czech Republic. The Act No. 326/1999 Sb. established three basic categories

of foreigners - citizens of the EU and EES member states and Switzerland, citizens of countries outside EU („third country nationals”) and other foreigners (applicants for international protection, applicants for temporary protection, foreigners staying illegally in the CR). The new laws have formed the foundations of the Czech migration policy up to the present. Beginning of 21st century opened new period in the development of Czech immigration policy connected with country 'accession to the EU. One of the most important change was deepening of different legal approach towards citizens of EU, EES and Switzerland on the one hand, and towards members of thirds countries. For citizens of EU, EES and Switzerland and for immigrants with a permanent residence the labour market has become fully open.

Accession of the Czech Republic to the EU was also imported milestone for further development of the integration policy. The integration policies described in a strategic document called 'The Policy for Integration of foreigners". The new conception of integration from 2005 has declared four basic priority areas: knowledge of Czech language, economic self-sufficiency, orientation of migrants in the society and relation with the majority. One of the main results of this conception is introducing of Czech Language Certificate Exam which is basic condition for the granting of permanent residence. Ministry of Interior has taken the responsibility for the coordination of the integration policy. The Ministry defined as main goal the prevention of the social exclusion of the immigrants. (Drbohlav et al. 2010).

Government integration policy have been rather critically reflected by several experts and by non-government organisations (NGO). Tollarová (2006) summarizes general experiences of NGO representatives, who indicate „language, work, housing” as a basic suppose for the integration. NGO representatives criticised several problematic aspects of Czech integration policy as missing strategy towards immigrants, unfriendly approach of the foreign police, lack of information, frequent changes of immigrant legislation, missing available courses of Czech language or prevailing support for the assimilation model of integration in the majority. Another authors dispute with several generalizations related to the integration of immigrants in the Czech Republic. For example, Šimon (2011) in his paper about situation of Romanian community in Bílá Voda shows the possibility of successful integration in the specific local conditions. Author emphasizes the importance of such values and behaviour standards of immigrants, which support their labour market participation as key condition for their integration. Older analyses of Czech integration policy have showed its limits on regional and local level. Rákoczyová and Trbola (2008) argued more than ten years ago that institutional integration in the most municipalities was completely undeveloped. The role of local authorities in the integration policy has been strengthened institutionally after 2008 (Drbohlav et al. 2010).

Fundamental changes in the area of integration policy on the regional level were made possible through financing from European funds. Financial support from the EU has helped to establishing regional Centers for the support of the integration of foreigners (Centra pro podporu integrace cizinců – CPIC or Centers). In 2009, the Refugee Facilities Administration of the Ministry of the Interior opened first four regional Centers for Support of Integration of Foreigners (in Pardubice, Plzeň, Ostrava and Zlín). Target group for CPIC present the third-country nationals who are staying in the Czech Republic under long-term or permanent residence permit. The aim of the CPIC is to provide services for foreigners through services – typically professional social counselling, legal counselling, Czech language and socio-cultural courses – following the government material “The Conception of Integration of foreigners”. Adoption of the language is considered as one of the key preconditions for successful integration. Language and other courses also respect the diversity of the culture and mentality of the individual immigrant groups. Public commitment of CPIC declares specific long-term goals of their activities. According to these goals, Centers want to increase the independence

and self-sufficiency of foreigners. Further declared aims of CPIC are facilitation of immigrant's orientation in Czech society and increasing the awareness of foreigners about available services. Centers support raising awareness about immigrants among the majority too. Centers should closely cooperate with NGOs, local authorities and other stakeholders. The national program of the Asylum, Migration, and Integration Fund (AMIF) currently funds the operation of Centers.

Operating of CPIC has become also a subject of scientific interest. For example, Gerstnerová (2014) focused on Centers participation in the integration of foreigners on the local labour market. Her research confirmed prevailing educational character of CPIC activities and only its indirect influence on labour market participation of immigrants. Position of Centers is characterized by dependence on financing from European funds. How also government document from 2016 admitted, effectiveness of CPIC was limited by problems with the funding and by low awareness of their activities (Conception of Integration of foreigners – *Ve vzájemném respektu*, 2016). Situation probably will change fundamentally in second half of year 2020. Current procedure in the implementation of the Conception of Integration of foreigners declares that long-term sustainability will be ensured by financing from the state budget. Change in funding is planned for July 2020 (Procedure in the implementation of the Conception of Integration of foreigners – *Ve vzájemném respektu*, 2020).

More detailed information about operating of CPIC can be found in annual reports of the Refugee Facilities Administration. Overviews of clients' numbers and the most provided services are also published here. Annual reports inform about typical tendencies and milestones of Centers development. First important change was expansion Center network and establishment workplaces or branches in several regions in 2010 (Annual report of the Refugee Facilities Administration for year 2010). Opening new branches in towns with bigger concentration of foreigners have continued since 2012. In the same year, the new professional social counselling and field programs substituted information and advisory services (Annual report of the Refugee Facilities Administration for year 2012). The last of CPIC was opened in the Central Bohemian Region in 2018. In this year, more than 6 747 clients used the services offered by all Centers, 5 489 clients used social and legal counseling services, and 3 883 clients attended Czech language courses. All Centers provided in this year 63 797 services. (Annual of the Refugee Facilities Administration for year 2018). Center clients traditionally came mostly from Vietnam, Ukraine, Mongolia and Russia.

CPIC should respond to current situation in individual regions. Head of Centers sets new operation goals annually. According to declared operational goals is possible to distinguish main areas of Centers activities. Social counselling for immigrants is one of the most typical activity mentioned in operational goals. Operational goals of several Centers (Ostrava, Kladno, Příbram) shows also emphasis on Czech language courses. Specific cases of services for immigrants are informational brochures about important social and economic issues (birth of child in and tax return – České Budějovice), and setting-up of club for children at age 3-6 years (Kladno). Operational goals focuses significantly also on cooperation with companies. Most Centers (České Budějovice already have begun the cooperation with companies and operational goals have declared its continuation. Further often planned action is participation in the community planning of social services (Kutná Hora, Olomouc, Ostrava, Zlín). Operational goals mention often cooperation with other stakeholders and with community workers from relevant foreign community – typically from Vietnam or Mongolia, exceptionally also from another countries, concretely from Nepal (Mladá Boleslav) and Serbia (Plzeň). Centers want to focus on informing the public and on educational activities too. Lectures aiming at reducing negative perception of foreigners for schools prepared by CPIC in Ostrava can be mentioned as typical example of this activity. Specific area in operational

goals of several Centers (Benešov, Jihlava and Plzeň) are courses for social workers and relations in teams (Operational goals of Professional Social Counselling of the Centers, 2019). Operational goals indicate different level of Centers activities connected also with number of immigrant in individual region. Overview of Centers development shows topics for further, more detailed research dealing with its effectiveness and coordination role in the process of immigrant integration on local and regional level.

4. Conclusion

Impacts of so called migrant crises have influence the perception of immigrant integration policy in Europe. However, new approaches towards immigrants integration has begun characterize the policy of the EU since the beginning of the 21st century. Common Basic Principles for Immigrant Integration Policy and later the EU Integration Action Plan of Third-Country Nationals show main priorities of European integration policy. Role of the EU in this area is primarily coordinative and supportive. Key importance has support from European funds. Financial help from the EU was crucial factor also for development of immigrant integration on local and regional level in the Czech Republic.

Characteristic feature of immigrant integration in the Czech Republic was missing conceptual approach, especially on local level. Specifics of Czech integration policy in the past and the present were influenced primarily by political factors and by changing international position of the country. As a consequence of opening the country's borders after 1989 and developing European integration, the Czech Republic has gradually become a target country for increasing numbers of refugees and immigrants.. Immigrants were hired to the Czech Republic mainly as a substitute for the lack of manpower in times of economic conjuncture. Government integration policy is inspired by the European trends and in line with that it supports the individual integration. Model of the individual integration of immigrants is supposed to confirm the respect for the values of majority society. The period of Czech migration policy after 2003 is characterized by process of legislative harmonization in the connection with entry to the EU. Influence of the EU had impacts on regional integration policy too. Support from the European funds has helped to setting-up regional Centers for the support of the integration of foreigners. CPIC have been opened by the Refugee Facilities Administration of the Ministry of the Interior and represent new form of integration policy in the Czech Republic. Annual reports and operational goals show that Centers have stable clientele and cooperate with key stakeholders (self-governances and companies). Further research should analyze real benefits of Centers activities especially considering that its long-term sustainability will be ensured by financing from the state budget.

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Brownfield Revitalization as an Opportunity for Smart Districts

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Abstract

Nowadays, Europe faces an increasing urbanization rate of around 80%; people struggle with environmental pollution and high energy consumption. New information and communication technologies are a way for cities to increase their competitiveness. The smart and intelligent city is aware of all these challenges and implements the necessary policies, such as brownfield revitalization into the smart district as a new way to deal with current urban challenges. The initiative of European Union called the European Innovation Partnership for Smart Cities and Communities supports such innovative projects. Therefore, the objective of this paper is to set recommendations and possibilities of cooperation with the private sector for the new smart district in Brno, the Czech Republic, mainly through the analysis of the practice of building the smart districts in selected foreign cities. The author carried out an international research and interviewed local experts. Apart from the interviews, the descriptive research method of the concept of the smart district is used, and selected foreign smart districts are compared.

Keywords: brownfields, brownfield revitalization, European Union, smart city, smart district, sustainable urban development

JEL Classification: O31, O52, R14, R52, R58

1. Introduction

Revitalization of abandoned objects and areas of brownfields is one of the suitable solutions of increasing urbanization. Cities strive to meet the demands and needs of its residents. The municipalities promote an urban concept called the city of short distances, which means for the developers to build a compact city or districts, where its residents could find all necessary services for daily life. Nowadays, with the emphasis on the quality of life of inhabitants and in relation to modern approach, brownfield areas are assessed as a significant element of an urban development. Public and state representants should take into consideration the potential of abandoned urban areas, that are usually former industrial zones and worsen the cultural-natural environment of the city (Turečková, 2018). According to Alker et al. (2000) brownfield site is any land or premises which has previously been used or developed and is not currently fully in use. The brownfield area may be abandoned, contaminated or insufficiently utilized. Although not immediately available for employment without any intervention. An assumption for successful brownfield revitalization is the socio-economic factor and, also the so-called green development. Projects including sustainable development elements represent the higher value for brownfield revitalization (Green, 2018). Atkinson et al. (2014) analyse the involvement of the public into the process of creating green development, for example through community planting of trees. From the beginning of the project, social interactions of local people will contribute to the revitalization process by solving local problems. The smart city

concept and green infrastructure is addressed by Artmann et al. (2019). The issue of brownfield revitalization is according to the research carried out in the municipalities of the Moravian-Silesian Region, in public interest to change these derelict areas. As the existence of brownfields bothers the residents (Turečková et al., 2017).

Realization of smart districts at the place of former brownfields is a new way of revitalization of unused urban areas. In the Czech Republic, for example, it is the Brno Špitálka project which is the subject of broad discussions and which is being inspired by the new smart district of Seestadt Aspern in Vienna, which grew up at the former airport. Smart districts are part of cities, the complex systems, that actively manage its energy consumption and implement the elements of smart city concept. Smart district integrates modern technologies to create a smart grid (Good, Ceseña and Mancarella, 2017). What does exactly the smart city concept mean is a subject of broad discussions and its unique definition has not already been set up. However smart city could be described as a city which promotes the growth of human and social capital and takes advantage of both traditional and modern communication utilities. In such a city the participatory government strengthen the growth of sustainable economy and a high quality of life (Rothe, Rutkowska and Sulich, 2018).

2. Transformation of Brownfields into Smart Districts

The concept of smart city was at its beginning linked to the development of industry at the European level, when the industrial activity called Smart Cities and Communities was established in 2011. Then in 2012 the European Innovation Partnership for Smart Cities and Communities (EIP-SCC) was revealed. The EIP-SCC is concerned with complex problems of energy, transport and information and communication technologies. An example could be a construction of a smart district with a positive energy balance. The European Innovation Partnership for Smart Cities and Communities points out the limited resources of European cities and proposes as a good practice sharing of experience and best practices in the implementation of smart cities (European Commission, 2012). European cities receive funding from Horizon 2020 within the so-called lighthouse projects. Cities involved in these projects could be either lighthouse cities, which are an example and inspiration for fellow cities. Fourteen projects have been funded under SCC since 2014, bringing together 44 lighthouse cities and 70 fellow cities. Czech cities are involved as fellow cities such as Prague, within the project Triangulum, and Brno within the project RUGGEDISED, and get inspiration how to transform existing neighbourhoods in low-energy smart districts (SCIS, 2020).

Brownfield revitalization and its transformation into a new urban district is a change in urban planning. In the past, new satellite towns used to be constructed in the city suburbs but now former industrial zones constitute a potential to become urban districts. These complex districts, usually situated in the city centres, should comprise all necessary services for common daily life such as shops, schools, apartments and offices. The concept of smart district is a new phenomenon in sustainable urban development and brings a higher value to the city development. According to the European Commission the concept of smart district consists of several buildings (new, old or combination of both) that actively manage their energy consumption and show annual positive energy balances (European Commission, 2018). The European smart project of this type has grown at the place of former airport in Vienna and is called Seestadt Aspern. Similarly, in the Czech Republic the project of smart district Špitálka is being negotiated at the place of former Heating plant in Brno.

Brownfield revitalization into a smart district is an opportunity for the city to address housing shortages, limited land resources and increasing urbanization, along with addressing the demand for greenhouse gas emissions reduction and sustainable urban development. Moreover, smart districts projects constitute an opportunity to test new technologies that could

be replicated in the rest of the city. In addition, the attractiveness of the city could be increased and the quality of life improved.

Regarding the methodology, this contribution is based on the literature review relating to the research problem. To achieve the objective of this paper, that is to analyse the phenomena of smart cities, brownfield revitalization and its transformation into smart districts and to evaluate the recommendations for the Špitálka project, a broad literature retrieval was carried out. The qualitative research was proceeded, and the data were acquired by semi structured interviews with local experts from Brno and Vienna. The author visited the studied areas of Seestadt Aspern and Heating plant in Brno – future site of smart district Špitálka.

2.1 Smart City Brno: Špitálka

In the future, the brownfield area of the western part of the unused Brno heating plant will be transformed into a modern smart district called Špitálka. This area is located in the city centre of the second largest city in the Czech Republic. The Špitálka project's objective is to create a neighbourhood, which is environmentally friendly and offers new housing units, creates new jobs and services. Another objective is to verify the use of new information and communication technologies and their spread to the rest of the city (re:Špitálka, 2020).

The city of Brno is a member of the RUGGEDISED consortium, thanks to which it receives financial contributions from the European Union for financing the Špitálka project. Brno represents the so-called fellow city and learns how to reduce the energy consumption of buildings or how to implement intelligent technologies or use available data (Brno, 2019).

2.1.1 Stakeholders Involved in the Process

The Špitálka project is led by the Brno municipality. The special post of a development site manager was established at Department of data, analysis and evaluation within the Strategic development and cooperation department. An international open one-phase urban design idea competition was announced by the City of Brno and organised by the City chief architect's office, another important stakeholder involved within this project, in cooperation with Data, analysis and evaluation department of Brno city municipality. Then the Heating plant of Brno plays an important role when negotiating about the future smart district Špitálka. As the area of 2.5 hectares, which is the subject of the RUGGEDISED project, is currently owned by the municipal company the Heating plant.

2.2 Smart City Vienna: Seestadt Aspern

An important urban project for the construction of a smart district is being implemented in Austria the capital of Vienna, where the Seestadt Aspern district has been built since 2009. The name was given to this project after the lake, which was created by filling the former sandpit with ground water. According to the master plan this development project is being realized on the area of 240 hectares and should be finalized by the year 2028. The new district of Seestadt Aspern, located in the northeast of the Austrian capital in 22nd district is called as a city-within-a-city, which tends to be a good practice for other urban projects (Orehounig et al, 2014).

2.2.1 Stakeholders Involved in the Process

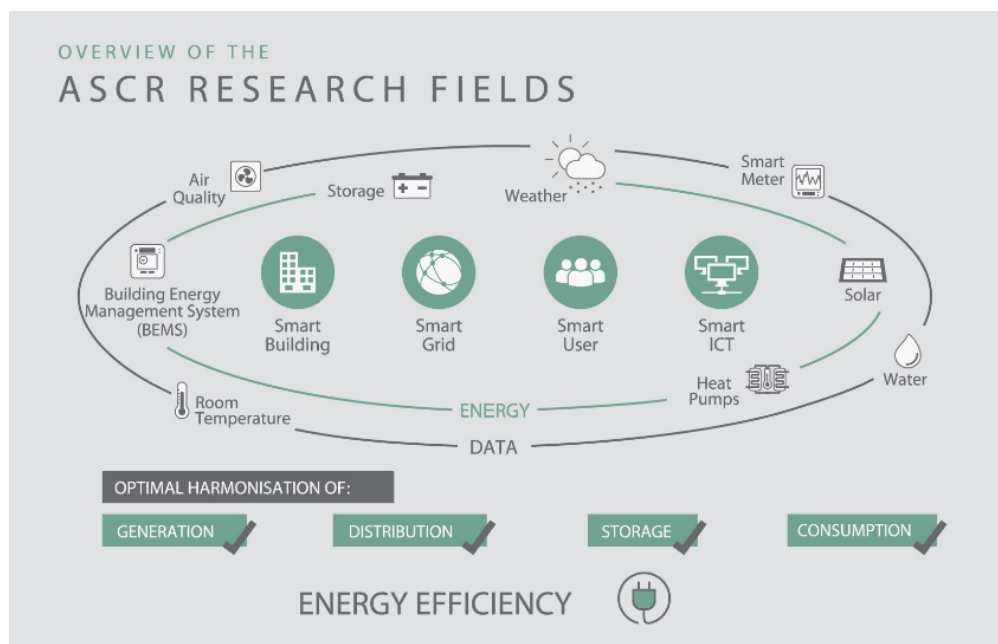
There are different stakeholders involved in the smart city Wien framework development process, which comprised: members form public (e.g. Office of mayor) or public enterprises (e.g. Research and innovation department of Vienna utilities), private organisations (e.g. Aspern smart city research), semi-public organisations (e.g. Tina Vienna Urban technologies

+ strategies), research organisations (e.g. Technical university Vienna) and citizens, so that the bottom up approach is ensured (Roblek, 2019).

The urban project of Seestadt Aspern is managed by Wien 3420 Aspern Development Agency, which is a private institution founded for a period of 25 years partly by public entities, who were former landowners. The Wien 3420 represents the private part within the public private partnership with the city. In spite of representing big players in the real estate market in Austria, they do not have enough capacity to build a team of people for the next 25 years of project development. Wien 3420 represents a group of 25 members, whose main task is to coordinate the planning processes of the Seestadt Aspern project. Wien 3420 announces competitions based on Johannes Tovatt's master plan from the year 2007. The winning design is chosen by the jury, where the decisive element is not only the price, but the emphasis is on design and functionality. The composition of the jury varies and is not a condition to put in it each time a member of Wien 3420 (Mitterwallner, 2019).

The Siemens company is involved in the Seestadt Aspern project to bring into it the technical expertise. Siemens carries out technical solutions within the Aspern smart city research project. In the first phase, three types of buildings were chosen to be studied. The technical elements for the future of energy were installed in a residential building, in a school campus and in a student dormitory. The aim of this project is to find out which measures are meaningful, acceptable and what are the technical needs of each type of building. The objective of the ASCR is to optimize its own consumption in the building. The project is planned to be extended to the northern part of the Aspern project (Smart City Wien, 2020).

Figure 1: Aspern Smart City Research Fields



Source: www.smartcity.wien.gv.at, Smart City Wien (2020)

3. Designs and Recommendations for Building a Smart District

Modern technologies do not make a district to be smart or a city does not become immediately intelligent. As the key to the success is to think cleverly about things and approach the planning process responsibly. The whole area of Špitálka project is 24 hectares large and the construction will start on an area of 2.5 hectares. Focusing first on the local part of the whole is a sign of tactical urbanism, which emphasizes flexible (tactical) tools to improve urban life. Tactical urban planning activities are considered as experimental labs and, when proven, could be implemented in other parts of the city (Yassin, 2019). Moreover, we should look at the Špitálka project as a living organism, that means to create an environment which is full of life and interactions. The city of Brno should ensure the diversity of retailers in the new districts, with the preference of local producers and local food over big supermarket chains. In addition, the self-sufficient city district supports small business and the planners should not either forget to include in such a district the coworking spaces and facilities of sharing economy, which is also a hallmark of a smart society, based on renting, lending, sharing or exchanging products. Such services of shared economy strengthen the trust among people, accelerate the formation of social relations and improve the cohesion of city districts.

The municipality of Brno cooperates within the Špitálka project with the Six research centre from the Brno University of Technology, which processes technical studies of energy and water infrastructure, district heating, sharing economy, waste recycling, etc (zVUT, 2018). This cooperation is assessed positively but it is considered important to establish the cooperation also with the private sector as part of the Špitálka project. According to the manager of the development project Špitálka, the Brno municipality aims to develop such cooperation with public sector through smart vouchers and should establish a better cooperation within the public private partnership. One of possible ways is to take inspiration from the Aspern Smart City Research, in which Viennese municipality cooperates with the Siemens company, that optimise the energy consumption in selected facilities within the Seestadt Aspern. This project of public private partnership could be replicated in Špitálka project. Another example of the public private partnership within the smart district construction is the Wien 3420 Aspern Development Agency, that itself oversees the whole Seestadt Aspern project. Wien 3420 is a private organisation founded by public entities that did not have the capacity to manage the entire project for 25 years. This subject is responsible for the business plans and announces competitions.

Concerning the financing of brownfield revitalization projects, there are available both funds of European Union and those at national level. In the actual programming period 2014 – 2020 the allocation of funds was reduced in comparison to previous programming period 2007 – 2013. As mentions Turečková (2018), the most important funds for brownfield regeneration and redevelopment financing projects are the European Regional Development Fund and operational programmes like the Integrated Regional Operational Programme, the Operational Programme Environment and the Operational Programme Enterprise and Innovations for Competitiveness. In addition, the Ministry for Regional Development proposes since 2019 the Programme Support of Revitalization of Territory with its three sub-programmes for the 2020 – the sub-programmes Demolition of buildings in socially excluded localities, Support for brownfield regeneration for non-business purposes and Creation of studies and analyses of the use of selected brownfields. In the next programming period 2021 – 2027 the financing of brownfield revitalization projects will be probably included in the renamed Operational Programme Technologies and Applications for Competitiveness, in the Integrated Regional Operational Programme and in the Operational Programme Environment (RRAJM, 2020).

4. Conclusion

The issue of brownfield transformation into the so-called smart districts is a relatively new, modern and up-to-date phenomenon, that has not yet been much explored by researchers. The construction of smart districts on the site of former brownfields brings opportunities to the city beyond the scope of an ordinary brownfield revitalization. As several policies are implemented within one area. The smart district offers solutions to the lack of housing units, limited land resources and thanks to smart technologies the energy performance of buildings is reduced. The sustainable development of cities is assured. Such a properly executed brownfield revitalization have the potential to increase the attractiveness of the city, contribute to better city environment and offer opportunities for further development.

The aim of this paper was to outline the concept of smart districts and its realization in selected cities of Vienna and Brno. The objective of this contribution was to set general recommendations and possibilities of cooperation with the private sector for the new smart district in Brno, the Czech Republic. As the cooperation of the municipality of Brno with the private sector within the public private partnership, not only within the smart district Špitálka project, is at its beginning. That's is why the Seestadt Aspern from Vienna is presented. Future research should be oriented according to Artmann et al. (2019) on collecting and understanding the data to approach smart and green cities. Good, Ceseña and Mancarella (2017) aim to focus the research on identifying, modelling and assessing business cases for smart districts.

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Social & Economic Repercussions of Migration In Its Countries of Origin

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Abstract

When discussing "migration and its consequences", the question typically asked is how the process affects the host country. Neglected, however, remains the effect that migration may have on the countries of its origin and the consequences it may have for personal, social and family relations. It is desirable, therefore, that the greater part of target countries adopted policies that would amend the relevant concept. Concept thus amended should properly consider also the impact that the policies may have on work immigrants and on the development of communities in the countries of origin. If the economic, social, developmental and standard-of-living benefits are to be maximized, the systems of managing in European Union circular migration will have to be vastly improved. The paper argues that professional discussion should be concentrated on suitable Europe policies and opportunities most effective for maximizing the developmental potential of migration. Relying on her own research and experience of working in developing countries, the author offers examples of good and poor practice, analyzing their repercussions for not just the affected region but also the local families.

Keywords: *countries of origin, economic impact, Europe, European Union, migration, social impact*

JEL Classification: *F63, F65, J61, O15*

1. Introduction

Drawing on contemporary literature about time-limited international migration and supported by a much wider array of works on circular migration, the author believes that this kind of migration can benefit the economic development in the migrants' home countries despite being hampered by the inefficiency of structures and institutions supposed to manage migration as such.

If migration is to be beneficial for the migrants themselves, for the country of their origin and the country of their destination (the win-win-win situation), the process of circular migration will have to be first thoroughly thought out and then carefully chosen and effectively governed so as to carefully balance the circular migration with the permanent migration. (Nova, 2016)

Judging by her lived experience, the author expects rather substantial differences between countries. The World Bank (WB, 2019) supposes that by 2025 the group of persons in productive age available in developed economies will be depleted by 25 million individuals. Within the same time the low-income countries will witness the group of productive persons to be enlarged by one billion persons. Aware of this demographic trend, we can anticipate that

migration, massive as it already is, will grow even more extensive (United Nations, 2019). Not surprisingly, an ongoing debate centers on what forms the process may assume and/or should assume – whether its envisaged effectivity and consequences favor the permanent or the circular form of migration.

Continuity of the theme for the EU and European integration. At this time, the coming leaders of the EU institutions will pay particular attention to how the bloc can learn to live with this new reality, given that migration to Europe is now practically manageable but still politically explosive. In this context, European policy-makers have developed a strong interest in accessing the root causes of migration. This approach focuses on targeted investment in the source countries in order to sufficiently strengthen the local economy to deter potential migrants from permanently traveling to Europe and rather to prefer circular migration. (Fine, Dennison, Gowan, 2019)

The EU must enhance its efforts increase voluntary returns and readmission and simultaneously make sure return decisions are implemented, for example through mutual recognition of return decisions. (Azmani, Oetjen, 2020)

Is it in the interest of us Europeans to make migration policy a cornerstone of the EU's external policy. Because migration is not an isolated issue but a topic that interlinks with our foreign policy, our trade policy and our labour policy. (Azmani, Oetjen, 2020)

1.1 Circular Migration and Development

Though having deep historical roots, the circular migration generated some interest and its developmental potential was properly appreciated only after the Global Commission for International Migration (GCIM, 2005) published the Report on International Migration: “the Commission concluded that the established paradigm of settling migrants in the countries of their destination gives gradually way to the temporary and circular types of migration – the Commission wishes to stress the importance of grasping the developmental opportunity that this major change in migrational patterns offers to the countries of origin.” (GCIM, 2005)

Some believe that, as regards the low-income countries of origin, the circular migration holds a greater developmental potential and may be more effective in alleviating poverty than permanent relocation. This belief is fostered by the fact that the circular migrants, who left the core of their families behind and pay them occasional visits, maintain closer ties with their home community than those resettled permanently. (Constant, 2020) What is more, the circular migrants are better disposed to send a greater part of their income back home in the form of remittances and they are naturally inclined to return home and be beneficial for their home country. (Hugo, 2004)

Certain countries of Asia endeavor to better the qualifications of persons who plan to seek a temporary job abroad (Hugo, 2006). Such effort is inspired by the expectation that the people, when gainfully occupied in a host country, will be better paid than their less qualified labor-market competitors and thus better positioned to send larger remittances to their home countries. Besides, the better qualified migrants will be more likely to enhance their professional prowess, experience and skills. In contrast to lower qualified people, the higher educated migrants will be better fitted to develop social contacts also outside their families, specifically with their colleagues, professional organizations etc. With such contacts established, they will be able to introduce new ideas and procedures to the country of their origin and to make useful contacts in trading, investments and the like. (Hugo, 2008)

Admittedly, the loss of human capital caused by the qualified workforce leaving in search of a temporary job can also damage the country of origin, an example being the Pacific regions. Starting in 2007, the Pacific regions have been abandoned by nurses and teachers who obtained temporary work visas from Australia and New Zealand – in consequence, the region's systems of health-care and education suffered (Voight-Graf, 2008). Given that the qualified economic migrants often have a good chance of applying for permanent residence in the host country, they are less motivated to return to their home countries than their lower qualified colleagues. The intentioned circular migration may thus outgrow into permanent migration and the emigration of entire families. (The World Bank, 2006)

The paper's author (Nova, 2018) has witnessed family solidarity that remained effective in spite of poverty and adverse social situations which the families had to tackle. She saw individual migrants working abroad who provided for several members of their families, not just the immediate relatives but the distant ones too – obviously, the family ties of solidarity are very strong.

2. Problem Formulation and Methodology

Wishing to put forward arguments relevant to the subject under discussion, the author presents a choice of her research results. With the subject in mind, she decided to apply both quantitative and qualitative methods of research, and when conducting the research the author placed special emphasis on the respondents. No less importantly, opinions had also been asked from the representatives of foreign NGOs and church officials.

2.1 Qualitative Research

To suit the purposes of our qualitative research undertaken in November 2019 and January 2020, we set up four focus groups of church officials and representatives from foreign NGOs, one deployed in each of these countries: Malaysia, Indonesia, Laos and Burma. Eventually this method proved to be instrumental in building up a comprehensive picture of the issues of our research interest.

First we set our sights on findings following from the qualitative researches of our focus groups. Below you will find a selection of results:

Discussions about the advantages of the circular migration as compared with those of permanent resettling revolve typically around benefits that these types of migration might bring to the host countries. However, we should not be unmindful of the good and bad consequences that migration may have for the individual migrants, for their families and their communities back home. Such discussions were held by our focus groups of church officials and NGOs representatives. Especially worth mentioning are these of their results:

- Some regions we have researched feared a collapse of so-called social cohesion that could be triggered by greater numbers of people leaving and by the rural areas thus being depopulated. In countries lacking a social system, the local community assumes the duty of a safety social net.
- A vexing problem proved to be the children left behind by their migrating parents, no matter whether they were involved in the circular or the long-term migration. Children growing without one or both parents in their home country were always significantly affected.
- An important issue was found to be breaking marriages and entering into new relationships in the host country.

- Some problems were observed to be caused by the transaction costs stretching the family budgets - many people find exorbitant the costs and fees charged by intermediaries, officials and travel agents for documents, training courses, etc. Such expenditures burden the families with debts even before their members set out to seek jobs abroad - they are also worried about being able to repay the debt thus incurred.
- Then there is the question of how the earned money should be used - what to buy... Returned migrants have just a very limited opportunity to make productive investments. They buy mostly agricultural land, better homes, cars or other vehicles and/or they invest into quality education for their children - a boarding high-school or a university at the capital city.
- Both the temporary work migration and the circular migration of low-qualified workers have been criticized for being a "new form of forced labor". Some regional NGOs equate this system with human trafficking and exploitation typical of such migration patterns. Other deleterious effects of long-time separation from families involve social consequences; scarcity of social mobility opportunities; and remote chances of acquiring permanent residency. Mentioned are also ties to illegal migration.

2.2 Quantitative Research

Relying on the relevant studies, on her own practical experience gained in Malaysia, Indonesia, Laos and Burma, and on the results of the focus groups, the author has formulated these hypotheses:

1) „Lower-qualified workers will return to their home countries more often than their higher-qualified counterparts.“; 2) „Money earned abroad will buy the respondents back home less personal property than they expected.“; 3) „Starting an own business after returning home will be easier because of the financial capital available.“; 4) „Family stability (harmonious relations with partners and parents) will be more important for the respondents than high income from abroad.“; 5) „Problems with legislation and bank transfers will be graver than security problems they might encounter in the host country.“; 6) „Respondents will expect stronger social support from churches and charitable institutions in the host country.“; 7) „Highly qualified workers and their circulation will be more effective in alleviating the poverty of families than what can be expected of the circulation of lower qualified persons.“

The research, conducted in rural regions and smaller cities of Malaysia, Indonesia, Laos and Burma, was carried out in January and February 2020. The author opted for a quantitative research and the interview technique. The number of questionnaires properly completed and returned to us for further processing was 239. All our respondents were knowledgeable about the issues of circular migration to foreign countries in search of work (primarily to the countries of Europe, Near East, Australia and USA).

Hypotheses evaluation:

- 1) The respondents confirmed that lower-qualified workers returned to their home countries more often than their higher-qualified counterparts - confirmed.
- 2) The respondents confirmed that money earned abroad bought them back home less personal property than they expected - confirmed.
- 3) The respondents did not confirm that starting own business after return was easier because of the financial capital available - rejected.

- 4) The respondents confirmed that their family stability (harmonious relations with partners and parents) were more important for them than high income from abroad - confirmed.
- 5) The respondents confirmed that problems with legislation and bank transfers were graver than security problems they encountered in the host country - confirmed.
- 6) The respondents confirmed that they expected stronger social support from churches and charitable institutions in the host country - confirmed.
- 7) The respondents did not confirm that highly qualified workers and their circulation were more effective in alleviating the poverty of families than what could be expected of the circulation of lower qualified persons - rejected.

3. Discussion and Problem Solution

Given the high number of migrants and the close ties they have with the home communities wherein their families live, the circular migration offers a vast potential for instituting beneficial changes. This assertion is best proven true by the fact that the circular migrants send back home greater remittances than the permanent migrants. What is more, they also plan to return to their homeland, an intention also desirable for the host countries and their systems of migration management. In the regions of our interest the remittances frequently constitute the only major source of investments from outside.

The idea of earning money where the wages are high and spending it where the wages and costs of living are low was very attractive to the respondents, even at the cost of being separated from their families. Similarly attractive, however, was their expectation of living (later on) at a place where they had their cultural roots.

As obvious, the circular migration can become an enduring structural characteristic of families and family economy - it does not necessarily have to result in permanent residence of migrants outside their homeland.

If the target country deliberately encourages migrants to visit their families as often as possible and does not make the visits so difficult that migrants finally choose to seek permanent residency in the host country, the circular migration is (or will be) potentially beneficial.

As follows from our research, having come to the target country, the respondents often had to work several months only to repay the loan they needed to fund their journey. Furthermore, if the employment agent deceives them and the promised job is not available, or the migrants are unable to fully honor the contract (for a variety of reasons), they and their families may be burdened with a heavy (and fast growing) debt.

Another occurrence often observed in our research was the exploitation of work migrants in their living abroad, in the process of preparing the trips to and from the host country and in mediating jobs for them.

The regions we explored showed a considerable potential for having their development positively affected by the circular migration thanks not only to the vast number of migrants but also to their strong ties with their home countries and family communities. That also explains the more substantial remittances they send back home. Besides, the circular migrants plan to return to their homeland, in keeping with what the migration management authorities in the target countries wish to achieve.

Our research also confirmed that in case of the low-qualified migrants the circular migration handled the problem of poverty more effectively than what was achieved by the high-qualified migrants. This observation can be attributed to just limited investments into entrepreneurial

and productive activities in the countries of our interest. The investments go mostly into land, better housing, cars, motorcycles and the education of children, all of them commodities that the high-qualified had possessed even before they left to seek a job abroad.

A major problem is posed by the transaction costs. The costs and fees charged by government officials and employment and/or travel agencies for documents, training courses etc. are often forbidding for the staff being recruited, and high above what can be considered appropriate and reasonable. Still, the author believes that there are ways of improvement that could and should be followed, e.g. the migrants could be given correct and complete information; they could be prepared for the process before leaving; the process of preparation could be effective and well managed; the agencies could be kept under control; cheap loans could be available to pay for the journey; and, most importantly, the employers in the host countries could be engaged in the process. Instrumental could also be foreign non-profit and/or charity organizations at work in the migrants' home countries.

Subject to discussion are also the regular visits of migrants in their home countries - these are the essential attribute of the circular migration and can become a key factor in assessing the effects that circular migration may have on individuals and their families.

The host country should see to it that migrants terminate their jobs and return home in the safest and least expensive manner. These issues could be greatly supported not only by the employers but no less so by the non-profit sector.

There are prominent examples of good practice, confirmed by also our research respondents: some employers pay the migrants twice a year (at times first agreed upon) their airfare home and back to the host country, i.e. the country of the employer's operations. Such a situation was most often (65%) mentioned in our research as an example of beneficial practice. Mentioned most frequently (72%) as an example of poor practice was a situation in which the employers refused to pay the migrants their full wages and/or quarterly, semi-annual or Christmas bonuses, claiming to retain a part of the due sum to make certain the employee would come back. Another practice that the migrants lamented (38%) rests in returning them their passports against a fee refundable after they report for work again.

4. Conclusion

The success of circular work migration depends greatly on the process of migrant selection and preparation before the people leave their home country. The chief influence, however, is exerted by the potential employers and the conditions the people encounter in the host countries. The countries of origin can affect the process through special agreements designed to specify the conditions of migrant work. Another factor contributing to the success of circular migration may lie, for example, in establishing national banks in the target countries and in creating similar mechanisms. Unfortunately, the tools and options of the sending countries are significantly limited by diplomatic practices and protocols.

The experience of work migrants is shaped primarily by governments and employers in the target countries. For that reason it is desirable that the programs and policies of most target countries concentrate not just on their own employees and employers but consider also work migrants and the communities that the migrants left behind in their home countries. While the governments of sending countries can hardly affect the policies of the receiving countries, non-governmental organizations of the former countries are often better positioned to build bridges between both the parties by cooperating with their counterparts in the latter countries.

The circular migration should fill the actual shortage of workforce and the employers must not take advantage of migrants to worsen the conditions offered to the local workers. This task is by no means easy and the success of circular migration will depend, the author believes, on:

- improved management of the circular migration - should corruption, exploitation and violation of human rights continue unabated, the developmental potential of circular migration will remain but inconsiderable;
- protection of the migrants' justifiable interests by the host country; the offer of available job opportunities; and the possibility of money transfers free from exorbitant fees and charges;
- readily available chances of travelling back home.

Backed by ten years of hands-on experience in working with migrants, the author perceives the circular migration as a complex process with a multitude of specific features potentially beneficial for the migrants. This type of migration can be a sustainable and long-term strategy of work mobility.

It is a solution that must be implemented through cooperation between the migrants' home countries and the potential host countries, while adopting a culturally sensitive approach..

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Bosnia and Herzegovina's Constitutional Reform Deadlock: The Narrow Path to the European Union

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Abstract

The Constitution of Bosnia and Herzegovina categorises citizens without affiliation to any of the three dominant ethnic groups as "Others". As a reflection of collective political rights for those three groups provided by the Constitution, "Others" are partially excluded from standing for national elections. Since 2009 the European Court of Human Rights has ruled three times that such electoral system violates the Convention. Enforcement of a Court's ruling is an obligation for a contracting state, at the same time, the compliance with the 2009 judgement is regarded as one of the most important EU conditionality. Nevertheless Bosnia has failed to do so. Some argues that comparing with the cases of the current EU member states, it is unjust to Bosnia to be posed such a non-compliance as a major obstacle to the EU integration. Though it must be difficult, if not impossible, to leave the problem unsolved, as long as the EU Treaties make much account of protecting human rights, particularly those of the minorities.

Keywords: *Bosnia and Herzegovina, collective rights vs. minority rights, Constitutional reform, EU conditionality, European Court of Human Rights*

JEL Classification: K01, K04, P03

1. Introduction

The official requirements for application to the European Union has changed significantly, preparing for the Fifth Enlargement which accepted in total twelve new member states in 2004, and then in 2007. Until the Treaty of Amsterdam entered into force in 1999, the requirement was only conditioned to be a European state. While, present Lisbon Treaty articulates that "*any European States which respects the values; human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities; and has a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail; may apply to become a member of the Union*" (§49, §2).

The official accession conditionality to the EU is called Copenhagen criteria, set out at the European Council meeting in 1993. When the European Council approves a European state seeking an admission to the Union as a potential candidate, a preparatory stage begins prior to a formal accession negotiation, where mainly the political criteria among the Copenhagen criteria: *stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities*, becomes a subject of the pre-negotiation stage (Schimmelfennig and Sedelmeier, 2004). To proceed to the next stage, a potential candidate has to satisfy the EU by implementing the assigned conditionality at the pre-stage substantially.

Ongoing EU Enlargement towards the Western Balkans virtually started in 1999, taking the intensified Kosovo War seriously, the EU decided to launch the Stabilisation and Association Process (SAP) for the purpose of stabilising the Balkan Peninsula. Concluding a Stabilisation and Association Agreement (SAA) with the EU is regarded as the first step for a potential candidate toward opening a formal accession negotiation. It is striking that while the Central and Eastern European countries were eager for winning a commitment from the EU for its membership early in the course of their transitional period, but were not given any promise for years, in contrast, the EU presented a prospect of the future membership for the Western Balkans at the very beginning of launching the SAP (EC, 1999).

In the case of Bosnia and Herzegovina (hereafter, Bosnia), the country was approved as a potential candidate at the Thessaloniki Summit in June 2003, and in November a feasibility study was conducted to evaluate the country's capacity to implement a future SAA. On the basis of the assessment, the first conditionality which covers various tasks in sixteen areas were assigned to Bosnia. The SAA was signed by June 2008, though it did not come into force in full-scale until June 2015, due to Bosnia's non-implementation of the preconditions.

Bosnia eventually applied for EU membership in February 2016 and submitted responses to the questionnaire and the follow-up one by March 2019. The European Commission, however, evaluated in May 2019 that Bosnia does not yet fulfil political criteria, nor has any policy areas where the country has a good level of preparation regarding its capacity to undertake the obligations stemming from EU membership (EC, 2019). Therefore, Bosnia remains to be a potential candidate at the moment.

The current Constitution of Bosnia was adopted as the Annex IV of the "Dayton Agreement": a peace accord which ended the war in Bosnia (1992-95). The essence of the so-called Dayton Constitution is, in short, the power-sharing scheme among the warring parties. Such a mechanism turns out to be a "straight jacket" during the post-war reconstruction period. Partly for that reason, the progress of the Bosnian accession process to this stage was only the outcome of propping-up. Every time a EU obligation touched a sensitive matter for the country things like recentralisation, the domestic politics tended to fall into chaos. Facing such turmoil or deadlock, the EU always became so impatient that their original demands were easily lowered or removed in order to put Bosnia onto the next step. We can find good examples in the cases of police reform, electoral reform, and et cetera.

In this paper, we will mainly focus on the issue of the electoral system stipulated in the Dayton Constitution. The problem of the police reform will be discussed additionally. The next chapter gives a brief outline of the national structure in Bosnia as a sequent to the Dayton mechanism, and then of the judgement of the European Court of Human Rights (hereafter, the ECtHR) in 2009 regarding the problematic electoral system and the aftermath of the ruling in addition to the efforts of amending to the Constitution. In chapter three, we will examine whether a counterargument against the stalemate over the country's accession process, which attempts to compare with other EU member states, offers a convincing consideration. The final chapter clarifies what makes the Bosnian accession process of joining the EU tougher, and concludes with a pessimistic view about a prospect for an accession of the country.

2. Problems of the Dayton Mechanism

The Preamble of the Dayton Constitution categorises people with ethnic affiliation to any of the three dominant ethnic groups, namely the Serbs, Croats and Bosniaks (Muslims), as the "constituent peoples". The Constitution grants high degree of political collective rights in order to institutionalise equal status among the constituent peoples. In accordance with the spirit, the

principle of equal representation becomes a guideline of constitutional institutions for choosing the same number of leaders from each of the three ethnic groups.

2.1 Electoral System at State Level

In the course of peace negotiations, the international community reluctantly accepted the authorities of the two already-existing quasi-states within the territory of Bosnia. The one is Republika Srpska (hereafter, RS) and the other is Federation of Bosnia and Herzegovina (hereafter, FBiH), and the unit is now named “Entity” by the Dayton Constitution. More than 80% of the population in RS is self-declared Serbs, and RS has a unitary structure, meanwhile FBiH is composed of 70% of self-declared Bosniaks and 22% of self-declared Croats.

The Dayton Constitution vested the state quite limited competences, and the residual powers are decentralised to the Entities. In FBiH most of the Entity’s powers are further decentralised to the present 10 Cantons. Consequently, the country with only 3.5 million peoples has 14 Constitutions including the Statute of a special administrative district Brčko, 5 Presidents, 13 Prime Ministers, 152 Ministers, 14 parliamentary bodies and 700 MPs (ConstitutionNet, 2011).

The role as a head of state and relatively ceremonial executive power is shared by a three-member Presidency, with rotating the Chair of the body every eight months. One Bosniak and one Croat member of the Presidency are directly elected in the territory of FBiH, and one Serb member comes from RS. Furthermore, the Dayton Constitution grants another form of the collective rights of the constituent peoples: the veto power. A member of the Presidency can veto over a presidential decision which might undermine the interest of the Entity he/ she is elected from.

The Delegates to the House of Peoples, the upper chamber of the state parliamentary system, are elected indirectly. Five of each Croat and Bosniak representatives are elected from the upper chamber of the parliamentary assembly of FBiH, and the other five Serbs are from RS National Assembly. Each group of the Delegates according to the affiliations of the constituent peoples may block any decision on the ground of the “vital interest” of their ethnic community.

On the other hand, with respect to the election for the House of Representatives, the lower chamber of the parliament is subject to no restriction for candidacy nor electoral district based on ethnicity. Though, the one-third of the 42 members are to be elected directly from RS and the two-thirds are from FBiH. This shows another political principle in Bosnia: a “Formula of 1:2”. Further, at the both Houses each MPs’ group divided by Entity of their origins may use the power of veto over any decision on the ground of the interest of their Entity.

Thanks to the community-based electoral system as a guarantee for the collective rights, the individual rights to political participation for those without affiliation to any of the constituent peoples: categorised as “Others” by the Dayton Constitution, and for those who recognise themselves as one of the constituent peoples, but reside in the “wrong” Entity: Serbs living in FBiH, or Bosniaks and Croats in RS, are partially infringed. Institutionally, they cannot run for the Presidency and the House of Peoples, nor have a possibility to vote for a candidate with the same ethnicity as their own representatives.

2.2. Rulings of the European Court of Human Rights

Two distinguished citizens in Bosnia, one from Roma community and the other from Jewish one, submitted their applications to the ECtHR respectively, on the ground that the relevant

articles of the Dayton Constitution on the electoral system for the Presidency and the House of Peoples, which restricts their political rights on the basis of ethnicity, are discriminatory and thus in conflict with the European Convention on Human Rights (hereafter, the Convention).

In December 2009, the ECtHR declared the applicants' principal complaints as regards their ineligibility to stand for the election to the House of Peoples and the Presidency admissible, and held that there has been violation of the Convention and its Protocol. The ECtHR assessed the disputed provisions of the Dayton Constitution were designed to end a brutal conflict marked by genocide and "ethnic cleansing", the nature of the conflict was such that the approval of the constituent peoples was necessary to ensure the very fragile ceasefire and peace. Nevertheless, the ECtHR observes significant positive development in Bosnia after the Dayton Agreement. The ECtHR agrees with the Government that there is no requirement under the Convention to abandon totally the power-sharing mechanisms peculiar to Bosnia and that the time may still not be ripe for political system which would be a simple reflection of majority rule, though there exist mechanisms of power-sharing which do not automatically lead to the total exclusion of representatives of the other communities (Sejdić and Finci vs. Bosnia; Application nos. 27996/06, 34834/06) .

Indeed, the ECtHR reiterates, concerning related cases submitted by a citizen in Bosnia who refuses to declare oneself any of the constituent peoples (2014 Zornić case, Application no. 3681/06) and by a Bosniak living in RS (2016 Pilav case, Application no. 41939/07), that the electoral system at issue has been in violation of the Convention mechanism.

2.3. Efforts to Alter the Discriminatory Mechanism

The drafters of the Dayton Constitution were fully aware of its fundamental flaw that the mechanism of the collective rights for the constituent peoples goes too far, and consequently some of the citizens divided into minorities are to be excluded from the political sphere (Nystuen, 2005). The drafters, therefore, hoped that someday near future non-nationalistic political parties gain more power to change the defected mechanism.

The EU takes structural flaw of the Dayton mechanism problematic, referring to it as "*too complex and fiscally unsustainable*" and as "*difficult to argue that the present constitutional order is optimal*" because "*the current set up does not support swift decision-making and hampers reform implementation*" (EC, 2005). The EU listed as the high priority, above all, the police reform aiming to consolidate police organisations scattered across the state at various levels and to unify the chain of command into one state authority. The electoral reform of the Presidency and the House of Peoples was of course listed as well. Although amendment to the Constitution itself was not on the list, it is indispensable to complete those required reforms. Initially, the EU conditionality was anticipated to become an ice-breaker of the deadlock in the Dayton regime, whereas such an idea soon turned out to be too optimistic.

In fact, thanks to the pressure from the international community, opportunities to discuss the amendment to the Dayton Constitution arrived several times between 2000 and 2009, above all, the tenth anniversary of the Constitution came around in 2005 was perceived as good occasion (Sebastián-Aparicio, 2014). Prior to the ECtHR decision, the Venice Commission: an advisory body of the European Council, provided its legal opinion on the draft amendments to the Dayton Constitution both in 2001 and 2006, pointing out serious flaws within the mechanism including the electoral system. Owing to the persevering persuasion, discussion, and bargaining, a compromise among the leaders of the domestic political parties was scarcely reached in March 2006 at the residence of the American ambassador. Unfortunately, though,

only two votes for the reform proposal called “April package” were short, and then the package was rejected at the House of Representatives.

In response to the 2009 ECtHR decision, the Council of Ministers of Bosnia adopted an action plan and established a working group in order to comply with it. Besides that, the Bosnia Parliament set up a joint committee. A lot of NGOs presented their reform proposals to the committee. Further, many of the foreign leaders spent considerable time coordinating for a compromise on this matter. When the campaign period for the national election of October 2010 started, however, all the efforts went nowhere because of the loud ethnonational rhetoric. Since then, the momentum for the amendment to the Constitution has been totally shrunk.

It is not only a general obligation for a contracting state to implement a ECtHR ruling, but at the same time, in the context of Bosnia’s accession process to the EU, enforcement of the 2009 ECtHR judgement has been regarded as one of the most important EU conditionality. Bosnia actually committed to reform the discriminatory electoral system so that it fully complies with the Convention as an obligation stipulated in the 2008 SAA. The Committee of Ministers of the Council of Europe repeatedly urges the Bosnian Government to execute the judgement, and the Council of Europe also put the enforcement at the top of EU agenda and made it a condition for application of a membership (European Parliament, 2015).

Bosnia is in breach of its duty up to the moment. Nevertheless, when the citizens’ protest against domestic politics spread across the country in 2014, the European Council suddenly decided to change its approach to Bosnia into pragmatic one, by leaving the sensitive issues behind the negotiations (Weber, 2018: European Parliament, 2015). The assigned conditionality was significantly relaxed, and without having the electoral system altered to meet the ECtHR’s rulings, the SAA was put in force in June 2015 as described later. Furthermore, the EU eventually allowed to Bosnia to submit for its membership.

3. A Counterargument Against the “Deadlock”

Well, some argues that non-implementation of the 2009 ECtHR judgement should not be posed as an obstacle to the accession negotiations between Bosnia and the EU (ESI, 2013). This opposing view holds that any citizen in Bosnia can declare oneself as any of the constituent peoples and virtually it is possible to change his/ her affiliation anytime, therefore the Bosnian electoral system in question is more liberal than neither Belgium’s nor South Tyrol’s.

The author continues that the 1960 Cypriot Constitution provides community-based voting system, where all citizens, including national minorities, have to belong either Greek or Turkish Community in order to exercise their right to vote and to stand for election. Moreover, the Constitution assigned the office of President only to the Greek Community, and a vice-President is to be elected from among the Turkish Community. In spite of such a discriminatory provisions on the basis of ethnicity, Cyprus became a EU member state in 2004 without altering such an electoral system.

As for Cyprus, Bosnia shares similar backgrounds with this country in a number of points indeed: historical crossover, ethnically-divided society, post-conflict Constitution which might be recognised as if ‘imposed by foreign powers’, and then community-based electoral system which somehow forces national minorities to disguise their identities if they want perfect political rights. On the other hand, what makes a crucial difference between the two countries is that the Cypriot Constitution expressly prohibits any amendment leads to alter the bi-communal structure in any way (§182). Whereas the Dayton Constitution assumes mechanical change unless it never eliminates or diminishes any of the human right referred in it (§X.1, 2) .

In addition to that, Cyprus was perceived to have satisfactory met both the Copenhagen criteria and requirements of European Monetary Union. Moreover, it should be mentioned as well that Cyprus modified its electoral system in response to the 2004 ECtHR judgement (Aziz case, Application no. 69949/01), after the EU accession, though. Due to the absence of Representatives from the Turkish Community since 1963, the unique “doctrine of necessity” makes the House of Representatives enable to legislate and to amend to the Constitution. In this wise a new legislation changed constitutional practice in order to enroll the Turkish citizens living in the Government-ruled area in the electoral roll so as to guarantee their electoral rights (Emilianides, 2019).

Unlike other several EU member states whose competences are substantially decentralised, a notorious feature of the *de facto* federal system in Bosnia lies in an inability to cooperate among the public institutions. Notably, such shortcomings are observed even at the field of police forces. According to the Dayton Constitution responsibility of maintenance of public order and safety is primarily assigned to the Entities, and then to the Cantons by the FBiH Constitution. That means police organisations are scattered into 14 different jurisdictions, which never associated with promptly. It only helps criminals cross the boundaries easily.

To take countermeasures, the EU was intended to create a single and exclusive police authority at the state level. Though the effort between 2003-08 ended in failure. Mainly because, the RS opposed any reform plan, arguing that the centralisation of police forces goes against the spirit of the Dayton Constitution, which guarantees autonomy of the Entities, and that the EU have no common rule on national police with an exclusive authority and supervisory jurisdiction, therefore Bosnia is imposed unofficial conditionality to establish it. In the end, the EU and other international actors failed to convince the opposing figures. Despite the apparent failure of the intended objections, the EU lift its conditionality and the suspended SAA was activated only on the ground that the domestic politics reached a conventional agreement on the police reform (Lindvall, 2009; Juncos, 2018). Since then the police reform issue has never brought up as EU accession agenda, with leaving the police forces fragmented.

4. Conclusion

The primary problem in the context of Bosnia’s EU accession is ascribable to the Dayton mechanism which guarantees collective political rights among the three constituent peoples excessively. Although the Dayton Agreement achieved a ceasefire and put the ethnic conflict in the deep-freeze, thanks to the collective rights any structural reform taken as an infringement of their entrenched interests never progress.

At the same time, fragmented jurisdiction over the functions of a state not only result in a major loss of finances, efficiency, and productivity, but looking at from the other way round, it constitute an over-expanded public sector and provides a good frame of clientelism and nepotism behind the institutionally protected ethno-politics. Coupled with those negative aspects, low economic growth, high unemployment rate (Grodzicki, 2018), malfunctioning market economy (EC, 2019), and so on, Bosnia looks less attractive from an economical perspective to the EU.

Taking into consideration the question of collecting enough support to pass a draft amendment at the Parliament, as Florian Bieber pointed out designing an optimal electoral system which grants proper electoral rights for “Others” and the constituent people reside in a “wrong” Entity on one hand, meanwhile maintaining the present power-sharing mechanism by means of the strong collective rights on the other hand, is quite difficult (Bieber 2006; Bieber 2010) .

Even if altering the disputed electoral system seems to be almost impossible politically, first and foremost, current EU Treaties place much values on respecting for human rights not forgetting minorities' as well, and a candidate country is clearly required to practice democratic values listed in the Article 49 of the Lisbon Treaty. Naturally, the EU does not need to accept a candidate in non-compliance with their requirement at the risk of destabilisation of the Union itself. Second, the rights at issue in the 2009 ECtHR judgement relate to the voting right as a very core of effective political democracy and the right to equality. An electoral system which deprives a certain group of people, who are excluded from the constitutional framework, of the right to stand for election has grave flaw in representative democracy. Unlike other conditionality whose primary goal is rebuilding a functional state, i.a. police reform, theoretically there is no way that the EU lowers or lifts the conditionality for electoral reform in light of the nature of the rights in question. Last but not least, the Dayton Constitution is equipped with a provision for amendment, that is to say altering the electoral system is institutionally allowed. There is no excuse for that.

Bosnia will not be able to acquire a EU membership unless the domestic politics, more specifically, the political leaders of RS give up maintaining present power-sharing mechanism guaranteed by the Dayton Constitution and then find a solution to design a national system without prejudice to the political right of every citizen. If they manage to rebuild this, the new governmental structure would function on a track to effective administration, because that should be the result of a certain degree of concessions from among the ethno-politics in Bosnia.

It sounds, however, like a fairy tale. Under current circumstances, it is far from a reality. The EU conditionality is mere soft power, too weak to transform the Dayton mechanism, narrowly agreed for a ceasefire in December 1995. It is not worth a significant number of politicians in Bosnia while complying with the EU obligations, what is clearly meant to abandon their ideology and cozy relationship between ethno-politics and businesses.

Now, we can only predict that the Bosnia's application will be suspended, and the pre-negotiation stage for a EU membership has to continue forever unless things turn around.

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The Attitude of the Forming “EU Core” toward the 17+1 Platform

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Abstract

The aim of the paper is to discern the existence of a shared approach of a forming “core” of EU member states, as well as of the EU institutions towards the 17+1 Platform of Cooperation created by China in Central and Eastern Europe (CEE). After a brief introduction to the 17+1 Platform, attention is focused on the opinions and policies of the institutions and “core” member states toward the platform. The reactions of the CEE countries are also mentioned. The main research methods consist of analysis of declarations and documents of the representatives of the EU institutions and aligned member states, as well as of scientific articles and relevant media outlets which focus on this issue.

Keywords: 17+1 Platform, Belt and Road Initiative, China, EU core, European integration

JEL Classification: F15, F53, F59

1. Introduction

This paper aims to address the existence and form of the common approach of the EU towards the 17+1 Platform of Cooperation created and led by China in the CEE region. This platform encompasses both EU member states and those states in the Western Balkans which are not in the EU yet, but are in various stages of the integration process. Whether their final integration into the EU will come to pass or not, these Western Balkan countries constitute a crucial region right at the doorstep of the EU. For the EU to be seen as a relevant actor on the world stage, it must be seen as being able to exert influence on its immediate neighbouring regions, such as the Western Balkans in terms of security, economic prosperity and upholding of values. Conversely, developments in this region also have a measure of influence on the EU, as was seen during the migrant crisis of 2015. For this reason, the EU cannot turn a blind eye to the rising influence of China in this region, much less in the CEE member states themselves. The EU itself is undergoing a process of soul-searching due to the crises of the previous decade – most notably the Eurozone financial and debt crisis, the migration crisis and the Brexit crisis, which have tested both its legitimacy and the current integration model. The EU is now at a moment where it has to determine how to proceed – whether it should redouble integration, accept a multi-speed or multi-track EU, or accept that integration has its limits – and in which policy areas (European Commission, 2017). Several member states declared their intention to continue with further integration whatever the outcome of these deliberations, and be part of an “EU core”, which will represent the EU mainstream, along with the EU institutions. This core would prefer more integration across the EU as a whole, but must deal with members who are either outright cool towards further integration, or pay lip service to it while implementing contradictory policies. The 17+1 Platform of Cooperation formed by China in the CEE region, and comprising both EU members and non-members, is seen by this core as a grouping that is

turning the CEECs away from the EU mainstream and that is exercising a disintegration influence.

Before proceeding, it is necessary to define the subjects of the research. The 17+1 Platform is a grouping consisting of 17 Central and Eastern European countries (CEECs) and the PRC (the “plus one”). The CEECs involved are divided into twelve EU member states (Bulgaria, Croatia, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia – all of them except Greece were among the so-called “new” members, i.e. those countries that joined the EU in and after 2004) and five non-EU states which are in various stages in the accession process to the EU (Albania, Bosnia and Herzegovina, Macedonia, Montenegro and Serbia).

The platform was established in 2012 in the 16+1 format, during a visit by Wen Jiabao, the then prime minister of China to Budapest. The first official 16+1 summit of heads of government took place the following year in Warsaw. This set the trend for subsequent annual summits. At the 2019 summit in Dubrovnik, in April 2019, the platform was joined by Greece, which had an important role in Chinese infrastructure development projects in the region, but had up to then been left out of the grouping due to being a former member of the Communist bloc. Since the previous year, therefore, the 16+1 has become the 17+1.

While China’s trade and investment relations were much more developed with the Western European members of the EU than the “newer” members which joined after 2004, they were not as privileged as they were before the turn of the millennium, relative to the dynamic development of China’s economic relations with other regions of the world (Končíková, Hloušek, 2014, p. 328). This was exacerbated by the economic recession following 2008, which led to a decrease in Chinese exports to the “older” EU member states. Such a development led China to seek place more attention on CEE. This was an attempt to replicate the success of China’s economic relationship with the old EU members.

The article focuses on the main tool of China’s influence in regions where it has created multilateral platforms, and that is investment. China uses its economic power, which it has augmented over the past several decades, as an important diplomatic tool. This is because China is uniquely strong in this area, being the world’s second largest economy (or even first, by certain metrics) and the largest trading nation, and presenting a significant success story in economic growth and development. By contrast, the CEE region is too distant and the issues not conducive for China to use political power or any type of hard power. Its soft power in the region is also severely lacking, though this is a complex issue which is outside of the scope of this article for reasons of space. Therefore, economics, and investment in particular, is the source of Chinese influence in Europe. The article shows the main fears of the EU core with regards to this investment and the power that China allegedly obtains through it, investigates their merits and describes some countermeasures (such as the investment screening mechanism, or ISM). It then presents some alleviating views from the CEECs and China that form a counter-narrative that tries to counter the fears of the EU core and perhaps expose a certain degree of hypocrisy. It seems that the threat posed by China has been made to appear more dire in the EU mainstream narrative than it is in reality.

2. Problem Formulation and Methodology

The 17+1 Platform is seen as a potential threat to EU unity by the EU core countries and institutions, because it comprises only a portion of the EU member states (with the Western Balkan countries), thus allegedly artificially dividing the EU, and because it was formed at the behest of China, which has its own diplomatic and economic agenda that is often at odds with

the EU. This article examines the principal fears of the EU core, namely the potential for China to use its investment in the CEE region to act as a “Trojan horse” and influence the policies of the CEECs to be more favourable to China by diverging from a “common EU consensus” espoused by the core member states and EU institutions.

The fears of the EU core can be seen in the context of the China Threat Theory, which has gained popularity among academics and politicians who are wary of the rapid rise of China and the challenge it allegedly poses to the Western-led world order and its values. According to this theory, China is a revisionist power, which wants to subvert the current economic (and political and security) order. China is thus interpreted as being a threat to those countries, mainly its neighbors, who wish to preserve the Western-led order. While in the Asia-Pacific region, this theory focuses on the political and security dimensions as well as the economic one, in Europe only the economic dimension is usually considered relevant, with China seen as an economic partner or rival, but not a strategic adversary (Haenle, Brattberg, 2018).

As stated in the introduction, the subjects of study must be defined. The definition of the 17+1 is clear and is given in the introduction to this article. The definition of the EU core is more controversial, as the core is not formally defined, and at present is merely an aspirational ideal or even a rhetorical device for pro-EU politicians. Since the concept of the core is linked to deeper integration, for the purposes of this article, the core will be defined as those EU member states which support further supranational integration and are leaders in pushing for such integration initiatives. Added to these countries are the supranational EU institutions, namely the European Commission (EC) and the European Parliament (EP), which articulate the mainstream or “core” attitudes, policies and priorities of the EU. On the contrary, those EU members which are seen as “eurosceptic” (defining their positions in contrast to the EU mainstream) and would prefer an intergovernmental approach, or else are lagging behind in joining the various common policies. Membership in the key common policies of the relevant areas of integration such as the Eurozone, Schengen area, and Common Foreign and Security Policy, as well as acceptance of the European Public Prosecutor’s Office (EPPO), are necessary though not sufficient criteria for membership in the EU core, according to this definition. Of course, any such definition will be arbitrary and subjective, until the EU core is formally defined.

However, it must be kept in mind that defining the EU core, whether possible or not, is not within the scope of this article, which is limited to the approach to the 17+1 Platform. This “working definition” was formulated merely to address the issue that articles dealing with this problem tend to see the EU as a unitary actor, even while differentiating between the “EU” and the CEE member states of the EU. This usage does not reflect the fact that the EU member states are divided among themselves on how to deal with China, or, more to the point, that several EU member states are part of the 17+1 Platform.

The main research methods consist of analysis of research papers of the relevant think-tanks and NGOs, as well as academic and scientific articles. An equally important study source are documents of the EU institutions. The publications of relevant media outlets (such as Euractiv or the Diplomat) which focus on this issue, are used to supplement the sources.

3. Problem Solution

The primary means that China is ostensibly using to influence the CEECs and divide the EU is its economic power, namely its investment. However, such claims seem exaggerated, since much more Chinese investment goes to the Western EU states (and most investment in the CEECs comes from the West), undermining this specific criticism against the 17+1 Platform.

3.1 Building Influence through Investment?

The EU elites, whether in the EU institutions or pro-EU politicians in the core member states (but also in the CEECs), are especially worried that China will use its vast economic power to influence the policies of the 17 CEE platform members. According to this criticism, the multilateral character of the platform is only nominal, with China fully able to use the asymmetry of power in its favour. The EU institutions and core states also complained about the lack of transparency of the Platform, which China attempted to remedy by expanding the observers to the platform (among which are the EU as a whole, Austria in particular, and the European Bank for Reconstruction and Development) (Grieger, 2018, p. 2). As an example of this unease, we may turn to the Joint Communication to the EP and the Council by the EC on Elements for a new EU strategy on China, presented in 2016. This strategy laid out the EU approach to the EU-China 2020 Strategic Agenda for Cooperation. In this joint communication, the (then) 16+1 Platform is mentioned once, as part of an appeal to all EU member states to ensure that the EU is able to “project a strong, clear and unified voice in its approach to China” (European Commission, 2016 p. 4). Apart from that, the EU members, whether acting within the 16+1 or in a bilaterally with China, “should cooperate with the Commission, the EEAS and other Member States to help ensure that aspects relevant to the EU are in line with EU law, rules and policies, and that the overall outcome is beneficial for the EU as a whole” (European Commission, 2016 p. 4). Here is expressed in diplomatic language the fear that China is using the 16+1 Platform (as well as bilateral relationships) as a “divide and rule” strategy within the EU by using its influence strategically, focusing on individual states or small groups of states rather than on the EU as a bloc. This influence can be exerted by China in various ways, such as by promising or withholding substantial trade opportunities and investment projects, or by directing its investment into sensitive areas of the economy. Among the most at-risk sectors are energy and telecommunications. Especially vulnerable are high-tech industries, where there are persistent fears that China will engage in intellectual property theft. (Szalai, 2017). Furthermore, the EU institutions have expressed concern that China is subverting EU law, and thus weakening the bloc, by not following EU regulations on investment and procurement. Fears of such subversion extend also to the formulation of EU policy, as seen in the example of some CEECs, (notably Greece which later became a member of the platform), which has blocked several votes condemning China in the EU Council, on issues such as the South China Sea dispute, China’s human rights record or market economy status (Grieger, 2018, p. 3).

Another reason for this fear is that much of Chinese investment comes from state-owned enterprises (SOEs) – around 70% as of last year (Zeneli, 2019) – which are closely linked to the Chinese government, and their activities are often interpreted through a political lens, rather than a purely economic one (Cihelková, Nguyen, 2018, p. 194). An example of such behavior was reported in 2016, when China allegedly tried to influence the Czech government to give the contract to expand the Dukovany nuclear power plant to a Chinese company without a public tender (Sinopsis, 2017). A similar situation happened in Hungary, regarding the construction of the Budapest–Belgrade Railway, the flagship project of the 17+1 Platform. Hungary and China agreed on the formation of a consortium of companies which would handle financing and construction of the railway, meaning that the project was awarded without resorting to a tender. This led to the EU launching infringement proceedings against Hungary for contravening EU rules on public procurement (Spike, 2016). Hungary resolved the situation by launching a new tender at the end of 2018, postponing the entire project (Budapest Business Journal, 2018).

For these reasons, some EU members, notably Germany and France, have adopted ISMs against investment that could be considered contrary to their national interest (Szalai, 2017).

They have called of an EU-wide ISM, which may eventually be seen as part of the EU core consensus on China. These first measures, have already led to decline in investment from China by more than a half over two years – from 37 billion USD in 2016 to 17 billion USD in 2018. But most of this decline happened in the older EU member states. For example, Germany, the largest destination for Chinese investment in the EU (apart from the UK, which has left the EU in the meantime) saw investment from China decline by 22% in 2018 (Kowalski, 2019). However, China has different goals in different regions of the EU or Europe. In the Western European countries, many of which make up the EU core, Chinese companies are focused on capital investment in high-tech companies, while in CEE they are more interested infrastructure development projects (Zeneli, 2019). The decline in investment in Western Europe shows that Chinese companies were primarily after the transfer of advanced technologies and intellectual property. An EU-wide ISM would therefore probably not have much effect on investment in the CEE members of the EU, though an exception could be found in offers by Chinese ICT company Huawei to construct the 5G high-speed internet network in the EU countries (Kowalski, 2019).

3.2 An Exaggerated Threat?

However, developments over the past several years have shown that these fears have been exaggerated. The amount of investment by Chinese companies in the 17 CEECs has turned out to be less than has been expected. Furthermore, much of this investment was in the form of acquisitions of local enterprises or subsidiaries, rather than greenfield investments that the CEECs were hoping for. This has led to a certain degree of disappointment on the part of the CEECs. Importantly, the amount of FDI coming from the other EU member states significantly outweighs the amount arriving from China. To take the most relevant example, of the Western Balkan countries, Serbia is seen as the one which is coolest towards the EU and the West in general, and conversely the friendliest towards non-Western centres of power such as China. But even in Serbia, China is responsible for only 2% of FDI, while the EU countries accounted for over 75% (Dudić, Dudić, Smoleň, Mirković, p. 4). Therefore, the idea of China using its economic power to divide the EU and become a significant rival to the EU in the Western Balkans does not have merit, and other sources of Chinese influence must be found to account for China's success in Serbia and the broader region.

The CEECs and China refuse this hostile interpretation of the 17+1 Platform, and point out that the guiding document of the platform emphasize that any projects must be within the parameters of the broader EU-China relationship and must abide by EU regulations (Butler, 2018). The CEECs also see the platform as having the potential to help their economies catch up faster to the EU (Grieger, 2018, p. 2). China itself sees this platform as open and not aimed against any actor or entity. It places the 17+1 within its Belt and Road Initiative, and describes it through its strategy of fostering multilateral cooperation. Indeed, the type of multilateral cooperation that China supports in platforms such as the 17+1 is one of the ways that China tries to project its soft power (Cibul'a, 2018, p. 108).

One specific suspicion on the part of the CEECs toward the criticism of China and the 17+1 Platform by the states of the EU core is that behind this criticism is simply the fear that traffic from China may be redirected from ports in the core countries (such as Hamburg, Rotterdam, Antwerp, Marseille or Le Havre) to ports such as Piraeus in Greece, or use overland railway routes instead. As a case in point, the computer company Hewlett-Packard, whose final assembly locations are concentrated to a large extent in China, declared in 2017 that it would relocate a large part of its distribution activities from Rotterdam to Piraeus (Gotev, 2017). The European Institutions also focus on this issue, mentioning the negative aspects of this trend,

such as labour and safety regulation issues (Grieger, 2016, p. 10-11). Some researchers from the CEECs, such as Richard Q. Turcsányi, suggest that accusations by the EU core states – that the 17+1 is a Trojan horse for China – are hypocritical, due to their strong economic relationships with China. Such a narrative by the EU core could be seen as dividing the EU into a core which is politically mature enough to have privileged relations with China, and a second-class periphery consisting of the CEECs, whose relations with China are suspect, and which cannot be trusted to keep in mind the general EU interest when doing business with China. This potential double standard could damage the unity of the EU on its own, without any help from China (Turcsányi, 2014). Of course, China can be expected to exploit any such rifts when the EU is debating a common policy toward China.

In spite of the reservations of the core EU member states and the EU institutions towards China's activities in CEE, it is unlikely that they would undertake any practical steps to hinder China. While the EU institutions, especially the EP, see themselves as guardians of the EU consensus on shared Western values which China is ostensibly working against, their power to influence the policies of the CEECs remains mostly on the level of declarations. There are exceptions, of course, such as flagrant violations of EU regulations as seen in the case of Hungary re-launching the tender for the Budapest-Belgrade Railway after EU infringement proceedings. For the EU core to take any meaningful practical action, the support of the core member states is necessary. Yet the most powerful member states of the core, the new “big three” or “big trio” of Germany, France and Italy, account for most of the investment from China into the EU. In 2017, these three countries along with the UK accepted 75% of Chinese investment in the 28 EU member states (Zeneli, 2019). When the UK, and investment bound for that country, is removed from the equation, we find that 64% of Chinese investment went to Germany, France and Italy, with the remainder dispersed among the other EU members, old and new (not counting the non-EU countries of the Western Balkans). By contrast, only 1% of Chinese investment was destined for the eleven CEE members of the EU (not yet counting Greece) in the same year (Kowalski, 2019). We can see that these three countries are still the privileged partners of China in the EU. On the other hand, it is these three countries that pushed for a common European Framework for screening FDI. It must also be said that the peripheral CEECs are not unique in bandwagoning on a Chinese-led initiative – all 15 older EU member states are part of the Asian Infrastructure Investment Bank (AIIB) created by China. In this case, it is the Western EU countries which are criticized, e.g. by the USA, for disrupting the Western democratic consensus opposed to the negative effects of China's rise as claimed by the China Threat theory. The core member states thus profit more from trade and investment with China than the CEECs, meaning they have little incentive to penalize China.

4. Conclusion

The EU is currently on a crossroads, determining how to move forward from Brexit and other crises of the past decade. While the institutions and certain countries which are the drivers of integration, self-indentifying as a EU core, wish for a more supranational union, the 17+1 Platform is seen by them as pushing its members the opposite way, representing disintegration tendency. The consensus of the forming EU core is therefore quite cool toward the 17+1 Platform. The EU institutions, as well as the core member states driving further integration, are suspicious that China is using the platform as a “divide and conquer” strategy to drive a wedge between the older and newer member states, as well as between the EU and the potential future member states from the Western Balkans. This view is in line with the China Threat Theory which has accompanied China's rise. In the EU, this threat from China is seen mostly through the lens of Chinese economic power, specifically its potential to use investment, whether promised or already allocated, to influence the policies of targeted states and thereby

weaken EU unity, the EU consensus on China, or the willingness of Western Balkan states to adopt the necessary reforms to move closer to the EU. These fears are heightened by examples when Chinese companies in partnership with the CEECs tried to circumvent EU investment regulations.

However, the risk of China using investment to carry out these tasks seems overestimated. Chinese investment in the 17 CEECs is still dwarfed by investment from the core and other older member states of the EU. Conversely, the bulk of Chinese investment to Europe still goes to Western European countries, most notably to the large and powerful countries most commonly associated with a future EU core, i.e. Germany, France and Italy (as well as the UK). Even so, these countries have pushed for a common EU ISM to combat any misuse of regional investment from Chinese companies. It is debatable however whether such an ISM will be effective in regard to the type of investment coming from China to the CEECs, i.e. infrastructure development projects, rather than the acquisitions of high tech companies and their intellectual property, which is what Chinese companies are after in the older EU member states. This is one reason that the CEECs are suspicious of the EU institutions and powerful core countries as well, wondering whether their rhetoric (such as insinuating that the CEECs cannot be trusted in their relationship with China) and proposed actions (such as the investment screening mechanism), are not merely ploys to retain influence in CEE and retain their privileged position in trade with China. Such words and actions might ultimately lead to a rift between the EU core and the CEECs, which China could then exploit.

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The Evaluation of Trade Relations between Poland and the European Union from 2004 to 2018

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Abstract

The accession of Poland to the structures of the European Union in 2004 brought significant changes of trade conditions between Poland and other EU economies. Trade relations constitute a vital part of international cooperation within the EU. The main aim of the paper is to study and evaluate the development of merchandise trade between Poland and the European Union from 2004 to 2018. The value of Poland's merchandise trade with the EU, its geographical and commodity pattern, as well as trade balance in both total trade and trade in specific commodity sections have been analyzed. In order to determine the character of advantages achieved by Poland in the Single European Market two indices have been implemented: B. Balassa's revealed comparative advantage indicator and H.G. Grubel and P.J. Lloyd's intra-industry trade index.

Keywords: *European Union, international trade, intra-industry trade, Poland, revealed comparative advantage*

JEL Classification: *F14, F15, P33*

1. Introduction

Gradual opening of the Polish economy which began in 1989 along with its transition from a centrally planned economy to a market economy, resulted in Poland's stronger and stronger integration with the world economy, and in particular in its accession to the European Union (European Union = EU) structures in May 2004 (Gomułka, 2016). Since then Poland has been a part of the Single European Market. Trade relations are considered an important element of international economic cooperation. Trade cooperation also constitutes one of crucial elements of regional economic integration processes (Fojtíková, 2014). Membership in the European Union considerably changed conditions for Poland's trade with other EU Member States, as well as for Poland's trade with the third economies (Pawlas, 2016). As far as trade within the EU is concerned, neither tariff instruments, nor para-tariff or non-tariff instruments of market protection are used (Nezval, 2014). When it comes to the character of trade relations with non-EU economies, common trade policy of the EU is implemented. Therefore, Poland is not entitled to introduce any trade policy instruments of market protection by itself. The paper aims to study and evaluate the development of merchandise trade between Poland and the EU from 2004 to 2018. A 15-year period of time, covered by the analysis, is long enough to observe the tendencies which occurred during the time of Poland's membership in the EU. Moreover, due to current tendencies of increasing protectionism observed in the world economy, as well as because of the 2020 crisis situation in the world economy resulting from the global pandemic, it is of particular importance to develop strong trade ties within the European Union, as global trade relations will be severely affected by the 2020 crisis.

2. Problem Formulation and Methodology

The following research questions were formulated: 1. What was the position of the EU against the background of other Poland's trade partners? 2. What was the geographical pattern of Poland's merchandise trade with the EU? 3. What was the commodity pattern of Poland's trade with the EU? 4. What was the character of advantages in Poland's trade with the EU? 5. What changes in Poland's trade with the EU were observed between 2004 and 2018?

In order to answer the research questions Poland's total trade turnover was compared to its trade turnover with the EU. Then, geographical pattern of Poland's exports to the EU and Poland's imports from the EU was studied. Furthermore, the analysis embraced the evolution of commodity pattern of Poland's exports to the EU and its imports from the EU by SITC sections. Moreover, trade balance in both total trade with the EU and trade in specific commodity sections have been studied. Finally, an attempt was made to determine the character of advantages achieved by Poland in the Single European Market. In order to do so, two selected indices were used, namely: B. Balassa's revealed comparative advantage indicator (revealed comparative advantage = RCA) and H.G. Grubel - P.J. Lloyd's intra-industry trade index (intra-industry trade = IIT). The research was conducted with the implementation of statistical data provided by Central Statistical Office of Poland and taken from Yearbooks of Foreign Trade Statistics 2007-2019.

Revealed comparative advantage was calculated with the adoption of the following formula (equation 1):

$$RCA_{iy} = \frac{\frac{Ex_{iy}}{\sum Ex_{iy}}}{\frac{Im_{iy}}{\sum Im_{iy}}} \quad (1)$$

where: Ex – exports, Im – imports, i – commodity section, y – trade partner. $RCA > 1$ means that the analysed economy (country) achieved comparative advantage in trade of i- commodity section with y partner (Budzowski, Wydymus 1999).

Intra-industry trade constitutes an important element of contemporary international trade (Ambroziak, 2018; Antonelli, Tamea, Yang, 2017). Intra-industry trade means simultaneous exports and imports within the same industry (Kawecka-Wyrzykowska, 2009). Intra-industry trade flows take a stand permanently; there are no mechanisms which would eliminate them (Molendowski, 2006). Some economists claim that the more developed the economies the more intense intra-industry trade between them (Czarny 2003; Davis, 1995; Antonelli, Tamea, Yang 2017). The intensity of intra-industry trade in Polish-EU relations was measured with the application of H.G. Grubel-P.J. Lloyd's formula for IIT index (equation 2):

$$IIT_i = \frac{(Ex_i + Im_i) - |Ex_i - Im_i|}{(Ex_i + Im_i)} = 1 - \frac{|Ex_i - Im_i|}{(Ex_i + Im_i)} \quad (2)$$

IIT index ranges from zero to one. If IIT index is close to one strong intra-industry trade is observed, if it is close to zero inter-industry trade is the case (Budnikowski 2003; Pluciński, 2015).

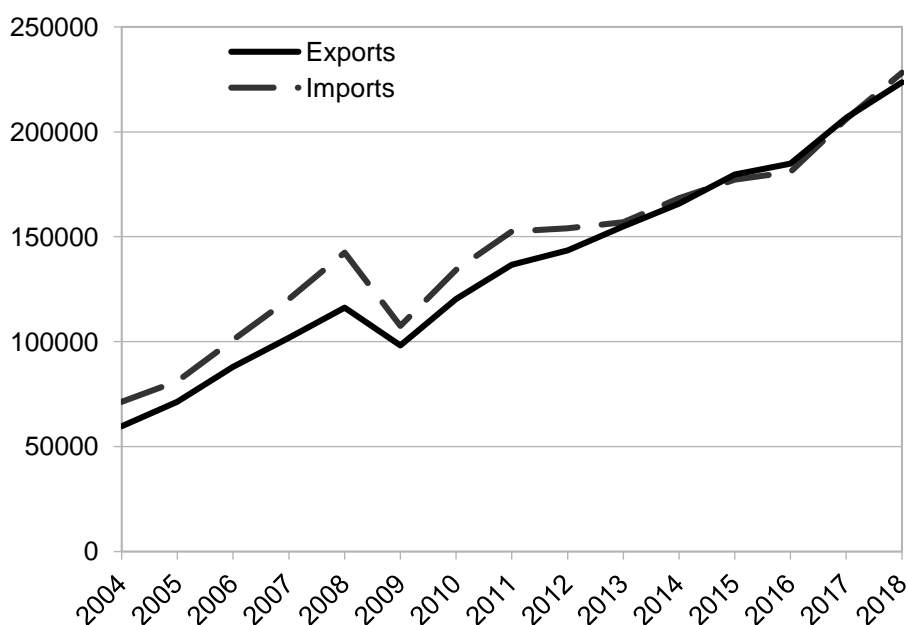
3. Problem Solution

The study of Poland's engagement in international trade turnover began with the comparative analysis of changes in its total merchandise exports and imports, as well as its trade relations with the EU. It was followed by the analysis of balance in Poland's total merchandise trade and in its trade with the EU. The next step was to analyse changes in the EU's share in both Poland's exports and imports. In order to identify the most significant trade partners of Poland among the EU economies, geographical pattern of Poland-EU trade was studied. The next step was to analyse commodity pattern of Poland's trade with the EU. Finally, the position of the Polish goods in the Single European Market was studied with the application of the two indices described above in order to evaluate the character of advantages.

3.1 The European Union as Poland's Trade Partner

Figure 1 presents Poland's total foreign trade turnover from 2004 to 2018, while figure 2 shows the evolution of Poland's trade turnover with the European Union in the same period of time.

Figure 1: Poland's Total Foreign Trade Turnover from 2004 to 2018 (million EUR)



Source: Own elaboration based on statistical data from Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

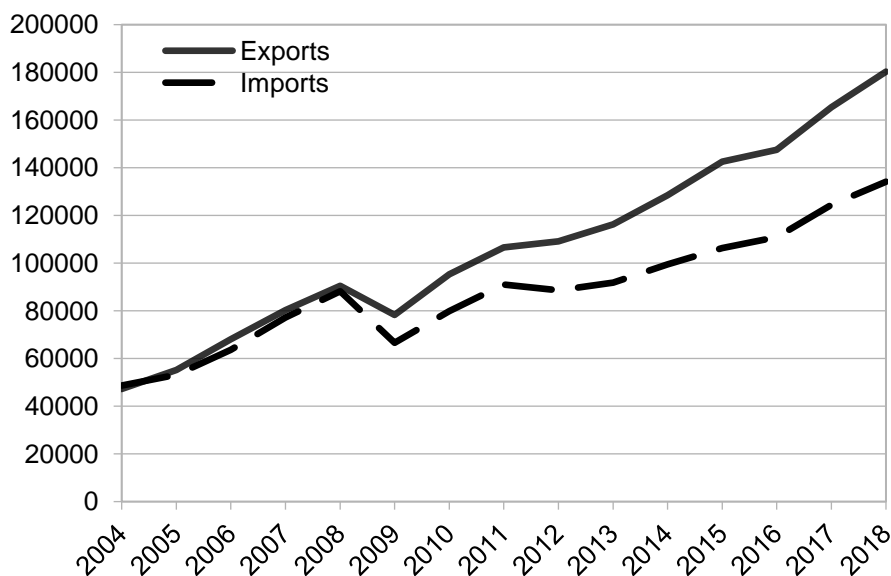
As far as Poland's total foreign trade turnover is concerned, one should note an upward tendency of both exports and imports between 2004 and 2008, followed by considerable reduction in 2009 (which was due to global financial and economic instability); then both total exports and total imports of Poland kept rising gradually. Moreover, negative balance of Poland's total trade turnover in the period 2004-2014 should be underlined, while the years 2015-2017 brought a slight surplus and in 2018 deficit in Poland's total foreign trade turnover was noted again.

The tendencies in regard to Poland's merchandise trade with the EU were very similar (i.e. rising exports and imports till 2008, considerable reduction in 2009, then increasing exports and imports from 2010 to 2018). The situation in terms of balance of merchandise trade with

the EU, however, was completely different: 2004 was the only year with a negative balance in Poland's merchandise trade with the EU, while from 2005 to 2018 Poland's exports to the EU exceeded its imports from the EU.

Table 1 presents the changes in balance of Poland's merchandise trade with the world and with the EU from 2008 to 2018. As mentioned before, trade surplus with the EU was noted in 2005 already and it rose up to EUR 46.15 billion in 2018.

Figure 2: Poland's Trade Turnover with the European Union from 2004 to 2018 (million EUR)



Source: Own elaboration based on statistical data from Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Table 1: Poland – Balance of Merchandise Trade with the World and with the EU (million EUR)

Specification	2004	2005	2006	2007	2008	2009	2010	2011
Balance with the World	-11656.3	-9746.2	-12858.2	-18550.8	-26204.1	-9310.9	-13815.3	-15874.5
Balance with the EU	-1437.4	1935.6	4381.5	3076.0	2285.9	11699.8	15437.6	15577.4
Specification	2012	2013	2014	2015	2016	2017	2018	
Balance with the World	-10584.1	-1984.0	-2658.7	2345.3	3918.3	562.9	-4575.9	
Balance with the EU	20499.2	24489.3	28941.2	36168.2	36744.9	40953.0	46150.9	

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Table 2 presents the EU's share in Poland's foreign trade turnover from 2004 to 2018. Gravity of the EU was extremely high in regard to exports. In the analysed period of time the EU's share in Poland's exports ranged from 75% (2005) to 80.6% (2018). When it comes to imports, the EU's share was a bit lower. Its maximum was noted in 2004 (68.3%). In the successive

years the EU's share in Poland's imports was gradually reduced and in 2018 it amounted to 58.8%.

Table 2: The EU's Share in Poland's Foreign Trade Turnover (%)

Specification	2004	2005	2006	2007	2008	2009	2010	2011
Exports	79.2	77.2	77.4	78.9	77.8	79.6	79.1	78.0
Imports	68.3	65.6	63.2	64.2	61.9	61.9	59.5	59.6
Specification	2012	2013	2014	2015	2016	2017	2018	2011-2018 change
Exports	76.1	75.0	77.5	79.4	79.8	80.0	80.6	+1.4 p.p.
Imports	57.5	58.5	59.0	60.0	61.2	60.4	58.8	-9.5 p.p.

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Table 3 presents Poland's top 3 trade partners in exports and in imports from 2004 to 2018. The strong gravity of the EU on the exports side of Poland's foreign trade was reflected in the fact that all top 3 trade partners of Poland in the analysed period of time were EU economies. Germany took the leading position in each and every year. Its share in Poland's exports amounted to over 30% in 2004 and 28.2% in 2018 (in 2008 the share of Germany in Poland's exports was the lowest – 25%). The 2nd position among Poland's partners in exports was taken by: Italy (2004, 2006-2007), France (2005, 2008-2010), United Kingdom (2011-2013, 2015-2017) and Czechia (2014, 2018). The 3rd place among Poland's partners in exports belonged to France (2004, 2006-2007), Italy (2005, 2008-2009), United Kingdom (2010, 2014, 2018) and Czechia (2011-2013, 2015-2017). The share of the 2nd and the 3rd partner of Poland in exports represented a bit over 6% of Poland's total exports in each and every year. As far as Poland's imports is concerned, Germany was the leader in the analyzed period of time (its share exceeded 24% in 2004-2005, later it was gradually reduced to around 22-23% (in 2018 it amounted to 22.6%). Italy was the 2nd most important trade partner in Poland's imports in 2004 and the 3rd one in 2005-2006. Russia took the 2nd position among Poland's trade partners in imports in 2005-2008, 2010-2013 and 2018, while in 2004, 2009, 2014-2016 and 2018 it was classified as the 3rd one. China occupied the 3rd place on the list of Poland's partners in imports in 2007-2008, 2010-2013 and 2018, while in 2009 and 2014-2018 it took the 2nd position.

Table 3: Poland's Top 3 Trade Partners in Exports and Imports from 2004 to 2018 (%)

Year	Exports						Imports					
	1 st Partner		2 nd Partner		3 rd Partner		1 st Partner		2 nd Partner		3 rd Partner	
2004	Germany	30.1	Italy	6.1	France	6.0	Germany	24.4	Italy	7.9	Russia	7.2
2005	Germany	28.2	France	6.2	Italy	6.1	Germany	24.7	Russia	8.9	Italy	7.1
2006	Germany	27.2	Italy	6.5	France	6.2	Germany	24.0	Russia	9.7	Italy	6.8
2007	Germany	25.9	Italy	6.6	France	6.1	Germany	24.1	Russia	8.7	China	7.1
2008	Germany	25.0	France	6.2	Italy	6.0	Germany	23.0	Russia	9.7	China	8.1
2009	Germany	26.2	France	6.9	Italy	6.9	Germany	22.4	China	9.3	Russia	8.5
2010	Germany	26.1	France	6.8	UK	6.3	Germany	21.9	Russia	10.2	China	9.4
2011	Germany	26.1	UK	6.4	Czechia	6.2	Germany	22.3	Russia	12.1	China	8.7
2012	Germany	25.1	UK	6.8	Czechia	6.3	Germany	21.3	Russia	14.0	China	8.9
2013	Germany	25.1	UK	6.5	Czechia	6.2	Germany	21.7	Russia	12.1	China	9.3
2014	Germany	26.3	Czechia	6.5	UK	6.4	Germany	22.0	China	10.4	Russia	10.3
2015	Germany	27.1	UK	6.7	Czechia	6.6	Germany	22.9	China	11.6	Russia	7.3
2016	Germany	27.4	UK	6.7	Czechia	6.6	Germany	23.3	China	12.0	Russia	5.8
2017	Germany	27.5	UK	6.4	Czechia	6.4	Germany	23.1	China	11.8	China	6.4
2018	Germany	28.2	Czechia	6.4	UK	6.2	Germany	22.6	Russia	11.6	Russia	7.1

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Table 4 presents geographical pattern of Poland's trade with the European Union from 2006 to 2018. The top 5 Poland's partners in exports among the EU constituted: Germany, the

United Kingdom, France, Italy and the Netherlands. Altogether the top 5 represented 64% of Poland's goods exported to the EU market in 2006 and around 61% in 2018. Germany alone accounted for 35% of Poland's export to the EU in both 2006 and 2018. The share of France in the Polish exports to the EU market ranged from 6.9% to 8.6% and the share of the UK stood for 7.4% - 8.9%. 5-6% of the Polish exports to the EU went to the Netherlands, while 5.7% - 8.4% of Poland's exports to the EU went to Italy. As far as imports from the EU is concerned, the top 5 of Poland's partners was formed by: Germany, Italy, France, the United Kingdom and the Netherlands. Altogether the share of the top 5 in Poland's imports from the EU accounted for 67% in 2006 and for almost 64% in 2018. Goods imported from Germany represented as much as 36.8% - 38.4% in the analysed period of time (and the highest share of Germany was noted in 2018). Italian goods accounted for almost 11% of Poland's imports from the EU in 2006, but later its share was gradually reduced and in 2018 it represented 8.7% of Poland's imports from the EU. The share of the UK in Poland's imports from the EU was quite stable – it ranged from 7.4% (2008) to 8.9% (2012). Imports from France accounted for 6.2% - 8.6% of Poland's imports from the EU. The share of the Netherlands in Poland's imports from the EU was a bit lower – 5% - 6.8%. Imports from the UK stood for over 4% of Poland's imports from the EU.

Table 4: Geographical Pattern of Poland's Trade with the EU (%)

Country	Exports							Imports						
	2006	2008	2010	2012	2014	2016	2018	2006	2008	2010	2012	2014	2016	2018
Austria	2.4	2.5	2.4	2.5	2.2	2.2	2.5	2.7	2.8	2.8	3.0	3.0	2.6	2.9
Belgium	3.6	3.3	3.0	2.7	2.9	2.7	2.9	4.0	3.8	4.0	3.9	4.1	4.3	4.2
Denmark	2.5	2.5	2.4	2.2	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.1	1.9	1.9
Finland	0.9	1.1	0.9	1.0	1.1	1.0	1.1	2.0	2.4	1.7	1.5	1.6	1.3	1.3
France	8.1	8.0	8.6	7.7	7.2	6.9	6.9	8.7	7.6	7.3	6.8	6.3	6.5	6.2
Spain	3.2	3.2	3.4	2.6	3.2	3.4	3.2	3.1	3.5	3.4	3.6	3.4	3.7	3.8
Lithuania	1.9	2.1	1.5	2.1	1.9	1.8	1.9	0.9	0.9	1.0	1.0	1.1	1.1	1.4
Netherlands	5.0	5.2	5.5	5.9	5.4	5.6	5.6	5.0	5.6	6.2	6.8	6.4	6.3	6.2
Germany	35.1	32.2	33.0	33.1	34.0	34.3	35.0	38.0	37.1	36.8	37.1	37.3	38.0	38.4
Czechia	7.2	7.3	7.6	8.3	8.3	8.2	7.9	5.5	5.8	6.4	6.4	6.1	5.9	5.9
Slovakia	2.7	3.2	3.4	3.4	3.3	3.1	3.2	2.8	3.1	3.5	3.6	3.1	3.3	3.1
Sweden	4.1	4.1	3.7	3.5	3.7	3.6	3.5	3.5	3.3	3.2	3.3	3.1	2.8	3.1
Hungary	3.9	3.6	3.6	3.2	3.4	3.3	3.3	3.4	2.9	2.9	2.8	2.7	2.9	2.8
UK	7.4	7.4	7.9	8.9	8.2	8.3	7.7	4.5	4.6	4.6	4.2	4.4	4.2	4.2
Italy	8.4	7.7	7.5	6.4	5.9	6.0	5.7	10.8	10.5	9.6	9.1	9.6	9.1	8.7
Total – main partners within the EU	96.4	93.4	94.4	93.5	92.9	92.6	92.6	97.0	95.9	95.5	95.1	94.3	93.9	94.1
Other EU countries	3.6	6.6	5.6	6.5	7.1	7.4	7.4	3.0	4.1	4.5	4.9	5.7	6.1	5.9

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Commodity pattern of Poland's merchandise trade with the EU is presented in tables 5 and 6. Machinery and transport equipment constituted the most important SITC section in Poland's exports to the EU – its share ranged from around 36% in 2012-2018 to over 40% in 2006-2010. Manufactured goods classified by material stood for about 20% of Poland's exports to the EU. Three more SITC sections should be listed here, namely: Food and live animals, Chemicals and related products and Miscellaneous manufactured articles. The share of chemicals and related products in Poland's exports to the EU increased from 6% in 2006 to about 8.5% in 2012-2018. The share of food and live animals in the Polish exports to the EU amounted to 8.5% in 2006 and it increased to around 11% in 2014-2018. Miscellaneous manufactured goods represented 13-15% of Poland's exports to the EU from 2006 to 2014 and

as much as 18% in 2016-2018. Altogether, the above listed five SITC sections accounted for 91.7% in 2006 and 92.7% in 2018.

Table 5: Commodity Pattern of Poland's Exports to the EU by SITC Sections (%)

SITC section	2006	2008	2010	2012	2014	2016	2018
Food and live animals	8.5	8.9	9.2	10.4	10.9	11.1	10.9
Beverages and tobacco	0.6	0.9	1.4	1.5	1.8	1.6	2.1
Crude materials inedible, except fuels	2.5	2.4	2.5	2.4	2.4	2.0	2.2
Mineral fuels, lubricants and related materials	5.0	4.6	4.5	5.4	4.3	2.6	2.7
Animal and vegetable oils, fats and waxes	0.2	0.2	0.2	0.2	0.4	0.3	0.1
Chemicals and related products	6.0	7.0	7.6	8.4	8.7	8.7	8.5
Manufactured goods classified by material	22.6	21.6	20.2	21.8	20.2	18.8	19.0
Machinery and transport equipment	40.6	40.7	40.9	35.8	36.2	36.9	36.1
Miscellaneous manufactured articles	14.0	13.5	13.5	13.5	15.0	17.8	18.2
Commodities and transactions not classified elsewhere in SITC	0.0	0.0	0.1	0.5	0.1	0.2	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

The most important SITC section in Poland's imports from the EU was also Machinery and transport equipment: it represented 33.5% - 37.2% of Poland's imports from the EU. Manufactured goods classified by material constituted the 2nd most important SITC section in Poland's imports from the EU. It accounted for 26% in 2006, but later its share was gradually reduced to 21% in 2016-2018. Chemicals and related products stood for around 17% of Poland's imports from the EU in 2006-2008 and for about 19% in 2010-2016. The share of Miscellaneous manufactured goods increased from 7.5% in 2006-2012 to almost 10% in 2016-2018. Moreover, the share of Food and live animals increased from about 5% in 2006 to over 8% in 2012-2018. Altogether the above mentioned five SITC sections accounted for 93.2% of Poland's imports from the EU in 2006 and for 92.8% in 2018.

Table 6: Commodity Pattern of Poland's Imports from the EU by SITC sections (%)

SITC section	2006	2008	2010	2012	2014	2016	2018
Food and live animals	4.9	6.4	7.5	8.4	8.5	8.6	8.3
Beverages and tobacco	0.5	0.6	0.7	0.7	0.7	0.8	0.7
Crude materials inedible, except fuels	2.2	2.3	2.6	3.0	2.9	2.9	3.0
Mineral fuels, lubricants and related materials	3.5	4.6	3.4	3.1	2.9	2.1	2.5
Animal and vegetable oils, fats and waxes	0.4	0.4	0.4	0.6	0.6	0.6	0.5
Chemicals and related products	17.6	17.2	19.5	19.1	19.2	18.8	18.2
Manufactured goods classified by material	26.0	23.5	23.6	23.2	22.2	21.0	21.0
Machinery and transport equipment	37.2	37.2	34.2	33.6	34.1	35.5	35.6
Miscellaneous manufactured articles	7.5	7.4	7.7	7.5	8.4	9.6	9.7
Commodities and transactions not classified elsewhere in SITC	0.2	0.4	0.4	0.9	0.5	0.1	0.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

Table 7 presents balance of Poland's merchandise trade with the EU by STC sections. In the analysed period of time Poland experienced deficit in its trade with the EU in regard to the

following SITC sections: Animal and vegetable oils, fats and waxes (the deficit ranged from EUR 117 million in 2014 to EUR 425 million in 2018), Chemicals and related products (the deficit ranged from EUR 7 billion to over EUR 9.1 billion), and in the case of Commodities and transactions not classified elsewhere in SITC (with the exception of the year 2016). Surplus in Poland's trade with the EU from 2006 to 2018 was noted in the case of the following SITC sections: Machinery and transport equipment (it increased from EUR 3.96 billion in 2006 to EUR 17.35 billion in 2018), Miscellaneous manufactured goods (the surplus increased from EUR 4.78 billion in 2006 to EUR 19.75 billion in 2018), Food and live animals (it increased from EUR 2.6 billion in 2006 to over EUR 8.6 billion in 2018), Beverages and tobacco (it increased from EUR 100 million in 2006 to EUR 2.8 billion in 2018), Mineral fuels, lubricants and related materials (the surplus ranged from EUR 147 million in 2008 to EUR 2.67 billion in 2014). In the case of Crude materials inedible, except fuels surplus was noted in the analysed period of time with two exceptions, i.e. 2012 and 2016. In regard to Manufactured goods classified by material, from 2006 to 2008 the deficit was noted in Poland's trade with the EU, while from 2010 to 2018 the surplus was observed (in 2018 the surplus was quite considerable; it amounted to EUR 6.0 billion).

Table 7: Balance of Poland's Trade with the EU by SITC Sections (million EUR)*

SITC section	2006	2008	2010	2012	2014	2016	2018
Food and live animals	2624.0	2381.6	2743.8	3958.3	5560.3	6821.1	8624.6
Beverages and tobacco	105.0	306.2	807.7	1057.3	1599.9	1527.9	2809.4
Crude materials inedible, except fuels	283.8	141.6	257.5	-36.3	179.2	-213.4	52.5
Mineral fuels, lubricants and related materials	1167.8	147.1	1517.9	3127.3	2670.4	1579.3	1500.7
Animal and vegetable oils, fats and waxes	-118.0	-179.6	-120.3	-240.0	-116.9	-159.8	-424.9
Chemicals and related products	-7096.2	-8866.0	-8347.4	-7833.7	-7929.4	-8095.6	-9131.8
Manufactured goods classified by material	-1200.7	-1147.1	444.4	3244.0	3856.8	4425.0	6013.1
Machinery and transport equipment	3960.5	4068.5	11655.9	9277.7	12625.6	15120.1	17351.5
Miscellaneous manufactured articles	4784.4	5732.4	6733.7	8112.6	10835.9	15639.7	19755.3
Commodities and transactions not classified elsewhere in SITC	-129.1	-298.7	-255.3	-167.9	-340.5	100.6	-399.7
TOTAL	4381.5	2285.9	15437.6	20499.2	28941.2	36744.9	46150.8

* - 2006 – million USD

Source: Own elaboration based on statistical data from Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

3.2 The evaluation of revealed comparative advantage of the Polish goods in the Single European Market

In order to determine the areas of revealed comparative advantages in Poland's trade with the EU, B. Balassa's RCA index was adopted (Pawlas, 2011). Table 8 presents the obtained research results.

Table 8: Revealed Comparative Advantage in Poland's Trade with the EU

SITC section	2006	2008	2010	2012	2014	2016	2018
Food and live animals	1.72	1.38	1.22	1.24	1.28	1.29	1.32
Beverages and tobacco	1.24	1.55	2.13	2.27	2.62	2.04	2.86
Crude materials inedible, except fuels	1.12	1.04	0.94	0.80	0.82	0.70	0.75
Mineral fuels, lubricants and related materials	1.43	1.01	1.30	1.74	1.50	1.26	1.07
Animal and vegetable oils, fats and waxes	0.51	0.53	0.54	0.43	0.62	0.56	0.25
Chemicals and related products	0.34	0.41	0.39	0.44	0.45	0.46	0.47
Manufactured goods classified by material	0.87	0.92	0.86	0.94	0.91	0.89	0.90
Machinery and transport equipment	1.09	1.10	1.20	1.06	1.06	1.04	1.01
Miscellaneous manufactured articles	1.87	1.83	1.76	1.81	1.77	1.86	1.87
Commodities and transactions not classified elsewhere in SITC	0.12	0.08	0.15	0.63	0.26	1.27	0.26

Source: Own elaboration based on statistical data from Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

The conducted analysis proved the existence of revealed comparative advantage in Poland's trade with the EU in the following SITC sections: Food and live animals (RCA index ranged from 1.22 to 1.72), Beverages and tobacco (RCA index ranged from 1.24 to 2.86), Mineral fuels, lubricants and related materials (RCA index ranged from 1.01 to 1.74), Machinery and transport equipment (RCA index ranged from 1.01 to 1.20), as well as Manufactured miscellaneous articles (RCA index ranged from 1.77 to 1.87).

3.3 The intensity of intra-industry trade in Poland's relations with the European Union

Due to the significance of intra-industry trade, an attempt was made to identify the intensity of intra-industry trade between Poland and the EU. H.G. Grubel and P.J. Lloyd's IIT index was used. The obtained research results are presented in table 9.

Table 9: Intensity of Intra-Industry Trade between Poland and the EU

SITC section	2006	2008	2010	2012	2014	2016	2018
Food and live animals	0.70	0.83	0.81	0.79	0.75	0.74	0.72
Beverages and tobacco	0.86	0.77	0.56	0.53	0.46	0.54	0.41
Crude materials inedible, except fuels	0.91	0.97	0.94	0.99	0.97	0.97	0.99
Mineral fuels, lubricants and related materials	0.79	0.98	0.78	0.64	0.68	0.75	0.82
Animal and vegetable oils, fats and waxes	0.70	0.70	0.78	0.69	0.89	0.86	0.51
Chemicals and related products	0.54	0.59	0.63	0.70	0.74	0.76	0.77
Manufactured goods classified by material	0.96	0.97	0.99	0.93	0.92	0.91	0.90
Machinery and transport equipment	0.92	0.94	0.82	0.87	0.84	0.84	0.85
Miscellaneous manufactured articles	0.67	0.69	0.65	0.62	0.61	0.58	0.57
Commod. and trans. not classified elsewhere in SITC	0.23	0.15	0.30	0.88	0.51	0.74	0.52

Source: Own elaboration based on statistical data from Central Statistical Office (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

The highest intensity of intra-industry trade between Poland and the EU was noted in the case of the following SITC sections: Crude materials inedible, except fuels (IIT ranged from 0.91 to 0.99), Manufactured goods classified by material (IIT ranged from 0.90 to 0.99), Machinery and transport equipment (IIT ranged from 0.84 to 0.94). It was a bit lower in the case of the sections: Mineral fuels, lubricants and related materials (IIT ranged from 0.64 to 0.98), Food and live animals (IIT ranged from 0.70 to 0.83), Mineral fuels, lubricants and related materials (IIT ranged from 0.64 to 0.98).

4. Conclusion

The European Union became the main trade partner of Poland before Poland's accession to the EU (A considerable change in geographical pattern of the Polish international trade was observed in the 1990s, due to the conclusion of Europe Agreement and gradual liberalization of trade relations between Poland and the European Communities). Membership in the EU structures strengthened the significance of the Polish-EU trade cooperation. The gravity of the EU is particularly high in regard to Poland's exports.; it is not that strong in terms of Poland's imports (due to the position of China and Russia among Poland's trade partners in imports). The strong position of the Polish goods in the Single European Market was confirmed by the surplus in Poland's trade with the EU from 2004 to 2018. In the analysed period of time Germany was Poland's leading EU trade partner in exports and imports. Moreover, Germany was also the number one trade partner of Poland in regard to trade with the world (both in terms of exports and imports). Machinery and transport equipment and Manufactured goods classified by material constituted well over 50% of both Poland's exports to the EU and its imports from the EU. The conducted research proved revealed comparative advantage of Poland in the Single European Market in regard to the following SITC sections: Machinery and transport equipment, Manufactured miscellaneous articles, Food and live animals, Beverages and tobacco, Mineral fuels, lubricants and related materials. The highest intensity of intra-industry trade between Poland and the EU was noted in the case of the following SITC sections: Crude materials inedible, except fuels, Manufactured goods classified by material, as well as Machinery and transport equipment. Further research should include a more detailed analysis of commodity pattern of Poland-EU trade. Moreover, further research should focus on Poland's trade cooperation with Germany as Poland's leading trade partner. However, due to a limited scope of the paper, it was not possible to include those aspects in the current publication.

Undoubtedly, the current extremely difficult situation in the world economy of the beginning of 2020 will be reflected in the EU Multiannual Financial Framework 2021-2027, as well as in common EU trade policy. It will considerably influence future position of the EU and EU Member States in the world economy, the overall structure of the world economy, including the character of trade relations, in that both intra-EU trade and trade of the EU with the world. At present, however, it is far too early to determine and foresee them all.

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Permitted and illicit Export Support within the EU in the Light of World Trade Organization Law

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Abstract

This paper deals with the issue of permitted and illicit export support within the EU and WTO. Within the European Economic Area are removed barriers that would otherwise prevent trade between the contracting parties. As a result, there is a possibility to export or import goods and provide services regardless of the existence of the original borders. EU law generally prohibits the granting of state aid, but there are some exceptions which are set down in EU regulations. The necessity of anchoring state aid at EU level is important in terms of not distorting the competitive environment, which has links with the WTO agreements. Also the WTO's one of the main missions is to support the functioning of international trade, on the basis of the rules set down in each agreement. WTO law is a framework that is inviolable for the Member States and therefore of the EU. The aim is to evaluate the situation of providing this support in the Czech Republic on the basis of theoretical knowledges related to legislation in the area of providing permitted and illicit export support.

Keywords: *European Union, state-supported export, support of export, World Trade Organization*

JEL Classification: *F13, F53, K33*

1. Introduction

International law is based on the principle of equality of states and each state can become a member of the international community, regardless of its economic, social or political differences (Gaines, 2012). By joining a community, state is obliged to adhere to the set rules.

The World Trade Organization (WTO) provides the basic framework for the development of foreign trade and lays down the basic rules that are subsequently applied and respected by the European Union (EU) as one of the WTO members. The WTO seeks to liberalize trade through multilateral agreements to remove tariffs and non-tariff barriers to trade. The issue of trade liberalization was addressed before the WTO was established. The multilateral trading system was developed first on the principles of the General Agreement on Tariffs and Trade (GATT) and then on the principles of the WTO. Unlike the multilateral system in Europe, the idea of common trade prevailed. This idea began to be gradually implemented from the beginning through the European Coal and Steel Community and gradually developed to today's Single Market and the EU's Common Commercial Policy. But the EU also plays an important role in the development of trade at global level.

The paper deals with the possibility of export support at WTO and EU level in the current global trading system. Attention is also paid to the EU's role in the WTO. The main aim of this paper is to explain how exports are supported at global level through the WTO and at European

level through the EU. The conclusion is based on the theoretical knowledge relating to legislation in the provision of permitted and illicit export support to assess the situation of providing this support in the Czech Republic.

In the paper, the methods of analysis, synthesis and description are used. In order to write the paper, it was necessary to study not only specialised literature, but above all the individual treaties and agreements concluded at the WTO and the EU.

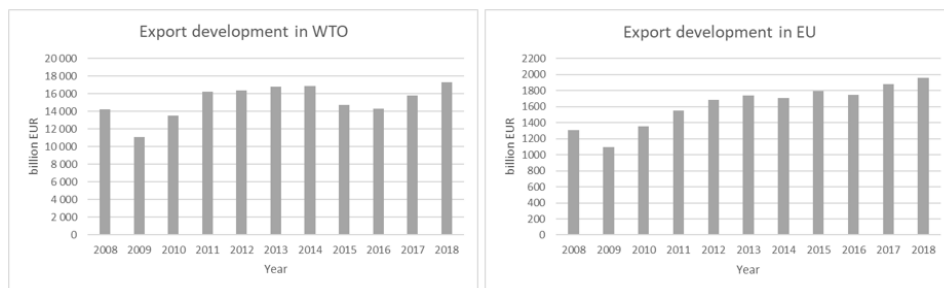
2. Export Support within the EU and WTO

The liberalization of the trade in Europe is linked to the changes that occurred in the late 1980s. As Gaines (2012) says, the European Communities (EC) and the General Agreement on Tariffs and Trade (GATT) have begun to respond to globalization in production and trade relations. In Europe, the Single European Act became the starting point for trade liberalization. However, the Single Market has grown steadily with additional members and areas. Therefore, a new agreement was needed - in 1993 the Maastricht Treaty was signed, changing the existing EC and creating the European Union (EU). At world level, trade liberalization has started to be negotiated under the Uruguay Round since 1986. The conclusion of the Uruguay Round in 1994, the scope of multilateral trade law was expanded, and GATT was transformed into a fully-fledged international organization – the World Trade Organization (WTO) (World Trade Organisation - The Uruguay Round, 2020).

Today, the WTO has 164 members, the EU only 27 Member States in February 2020 – after the United Kingdom left the Union (Brexit). The EU is represented in WTO by the Member States, but the EU is also a member as a whole union. Each state always has one vote, as well as other Member States. However, during the approving multilateral agreements, the EU acts as a whole. Members are obliged to respect the rules and objectives of the EU Common Commercial Policy (Fojtíková, 2006). At the same time, EU Member States remain independent countries, each of which is a member of the WTO (Gaines, 2012).

The fact that the EU is part of the WTO does not mean that the adjustment of export support is identical. According to Gaines (2012), despite the fact that the EU and the WTO have common roots in economic theory and related legal principles, there are many differences in their basic structure and ambitions and in their relationship with the constituting national governments. Butkus, Karpavicius, Matuzeviciute (2018) found in their research that WTO membership increases exports immediately by 12.5-13.5% but has no major effect in the longer term. Whereas EU membership has an impact on exports with the delay. Overall, the value of exports increases over time. We can see it in the graphs below. Figure 1 shows the development of exports of WTO and EU members over the last ten years (from 2008 to 2018). For both graphs we can notice a rising trend.

Figure 1: Export Development



Source: WTO and Eurostat, own elaboration

State supported exports is intended to facilitate the export of goods or services to foreign markets. Fojtíková (2006) claims that the state's pro-export policy focuses on increasing the competitiveness of domestic products on foreign markets. On the other hand, it distorts free trade by targeted state intervention. Thanks to state support, the incomes of the population increase, the supply of goods and services increases and the economic growth of the country increases (Nowakowska-Grunt, Szymczyk, 2018). Mostly, for example, export insurance, as one form of export promotion, is provided by the government (for example through ECAs) and some argue that state export support distorts competition and undermines the multilateral trading system. But not always supporting export means disrupting trade. For this reason, export support and export insurance are regulated by the WTO and the EU (Abraham, Dewit, 2000). According to a study by Sharov, Pinskaya, Bogachev (2018), many scientists have concluded that the welfare of the country is growing through subsidies.

2.1 Support of Export at WTO Level

The WTO covers 98% of world trade and the aim is ensuring the predictability and fairness of the world trade system. The task of the WTO is therefore to adopt common rules and to monitor their compliance (Evropský parlament, 2019). The WTO aims to establish legal rules for trade in the form of agreements, to create forums for international trade negotiations, to resolve trade disputes and to monitor the trade policy of its members through the Trade Policy Review Mechanism (European Commission, 2019).

Even before the signing of GATT, so-called bilateral agreements were concluded between individual states. Now the multilateral agreements are being concluded. According to Irwin (2008), the GATT was created in order to remove or weaken barriers to international trade while promoting measures that can promote trade between the countries. After the signing of the GATT in 1947, it was found that the regulation of trade through tariffs did not meet the intentions of the State and therefore tariff reductions were complemented by other non-tariff safeguards in connection with the deepening of national trade policies. According to Kalínská (2010), the category of tools for support of export includes, for example, tax reliefs, state-guaranteed loans, export insurance and of course subsidies.

The granting of subsidies as financial contributions by the State is regulated by multilateral trade agreements. An Agreement on Subsidies and Countervailing Measures is concluded in this area. In this agreement we can find in Article 1 what is considered a subsidy. A subsidy is a financial contribution of a government to a precisely defined activities in this Agreement. These are direct transfers of resources such as grants, loans and equity infusion, release and non-collection of government revenue or the supply of goods or services by the government. The agreement divides subsidies into prohibited, actionable and permissible (non-actionable), and different remedies are always provided. Prohibited subsidies are trade distorting aid. It is an aid that are tied to export performance, at favouring domestic over foreign and the specific aid to a specific company. By actionable subsidies are meant subsidies which may be granted but may not adversely affect the interests of other members. Non-actionable subsidies include, for example, aid for research activities, aid to disadvantaged regions in the territory of a Member State and aid to support the adaptation of existing facilities to new environmental requirements. However, the conditions for granting are always precisely specified. The Agreement also contains rules governing the application of countervailing measures - the specific duty levied in order to offset the subsidy.

In addition to GATT and the Agreement on Subsidies and Countervailing Measures, several multilateral agreements on trade in goods are concluded. These are Agreement on Agriculture, Agreement on Textiles and Clothing, Agreement on Trade-Related Investment Measures,

Agreement on Technical Barriers to Trade, Agreement on Application of Sanitary and Phytosanitary Measures, Agreement on Pre-shipment Inspection, Agreement on Rules of Origin, Agreement on Import Licensing Procedures, Agreement on Trade Facilitation, Agreement on the Implementation of Anti-dumping Measures and Agreement on Safeguards.

The WTO's strongest partner is the EU, which participates in multilateral negotiations, oversees and evaluates negotiations through the European Parliament, and played an important role in shaping the world trading system (Evropský parlament, 2019).

2.2 Support of Export at EU Level

Pro-export policy remains in the hands of individual states, but at the EU level remains the Common Commercial Policy, which defines the basic rules of trade with third countries – negotiating bilateral and multilateral agreements. It is therefore an exclusive competence. International trade has become one of the first sectors where Member States have given up their sovereignty. The Common Commercial Policy is enshrined in the Treaty on the Functioning of the EU (TFEU) in Articles 206 and 207. Under the Treaty, the Common Commercial Policy is based on uniform principles and regulates customs tariffs, concluding customs and trade agreements on trade in goods and services, commercial aspects of intellectual property, foreign direct investment, unification of liberalization measures, export policy and trade defence measures (dumping, subsidies). It can therefore be said to cover 3 areas - trade in goods and services, foreign direct investment and commercial aspects of intellectual property (Evropský parlament, 2019). Under Article 207 TFEU, negotiations on international trade agreements and all trade-related matters are in the hands of the European Commission and the European Council.

The Common Commercial Policy sets the framework conditions for trade for export to third countries, for the trade between Member States within the EU there is an Internal Market. It allows free, barrier-free access to the European market (Fojtíková, 2014). The Common Commercial Policy has always been one of the most important common policies of the EU and its core is a commitment to the multilateral trading system established by the WTO (Uçkan Dağdemir, 2018). In the EU, trade is also facilitated by a Customs Union. However, Týč (2006) points out that there are countries that are not members of the EU but are members of the Customs Union - Turkey, Andorra, Monaco and San Marino.

There are several kinds of export support. Export support can be realized either by direct financing or refinancing through commercial banks or by providing bank guarantees (Majtanova, 2002). Indirect export support, such as subsidies, state-supported insurance, subsidized lending and others, can then exceed allowable support and fall into the area of illegal export support (Rožehnalová, 2010). Another possibility of export support is the use of Export Credit Agencies (ECAs). These are agencies through which governments provide officially supported export credits and are government institutions or private companies operating on behalf of governments. These agencies support national exporters through direct loans, refinancing, interest rate support, but also through export credit insurance or loan guarantee coverage (OECD – Export credits, 2019).

Insurance activities also play an important role in supporting exports. The exporter has the possibility to insure himself against commercial as well as territorial risks and thus secure the possibility of exporting his product to foreign markets. Export credit insurance increases product competitiveness and significantly affects export performance (Majtanova, 2002). Within the EU, export credit insurance is regulated according to the OECD Recommendation in Council Directive 98/29/EC of 7 May 1998 on harmonisation of the main provisions concerning export credit insurance for transactions with medium and long-term cover.

2.2.1 The Role of the EU in the WTO

As mentioned above, the EU is a member of the WTO, as are individual EU Member States. The EU's aim at the WTO is to maintain a fair world trading system, modernize world trade markets, observe common WTO rules and monitor compliance with others, ensure greater interaction with non-member countries, include developing countries in the WTO and promote the sustainability of trade policy around the world (European Commission, 2019).

In matters of WTO acts the European Commission for all 26 member states, which before signing the negotiated agreement must obtain permission of the EU Council and the European Parliament. The EU is represented in the WTO by EU Trade Commissioner Phil Hogan. The signed agreements are then binding to all Member States, regardless of whether they are exclusive or shared competence because the WTO law is part of EU law (Mrlinová, 2012).

Under Article IX of the Agreement establishing the World Trade Organization, the decision is taken by consensus and, if that is not possible, each member has one vote. The EU has as many votes as Member States. In addition, the European Commission initiates and handles WTO complaints and discusses developments related to WTO policy with interested parties (European Commission, 2019).

3. Permitted and Illicit State Aid

The purpose of the state's activity in the area of state aid is to assume a certain risk and provide a guarantee, especially where the guarantees of commercial insurance companies cannot cover the exporter to such an extent or are unavailable to the exporter (Rožehnalová, 2010).

State aid is defined by the TFEU in Article 107 and it is "*any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market*". State aid is therefore defined by the features contained in Article 107 - the aid is granted from public funds, favours a particular business or sector, affects trade between Member States and distorts or threatens to distort competition. If the aid did not show all these features, it would not constitute State aid. According to Kincl (2012), the most flawed forms of state aid include subsidies, state or other public guarantees, capital increase by public authorities, sale of assets at a discounted price, deferral of the purchase price, credits, tax reliefs, remission of contractual penalties and others.

The borderline between permitted and illicit support is very thin. Permitted support is one that is compatible with the internal market. The various options for permitted aid are directly content at the TFEU in Article 107 (2) and (3).

The subsidies in paragraph 2 are so-called *general exceptions* and are:

- a) aid having a social character, granted to individual consumers,
- b) aid to make good the damage caused by natural disasters or exceptional occurrences,
- c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany

Paragraph 3 lists the so-called *individual exceptions*:

- a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment,

- b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State,
- c) aid to facilitate the development of certain economic activities or of certain economic areas,
- d) aid to promote culture and heritage conservation,
- e) other categories of aid as may be specified by decision of the Council on a proposal from the Commission.

In addition to the above, there are also so-called *block exemptions* which constitute aid compatible with the internal market and can therefore be granted. These exemptions are set out in Commission Regulation (EU) No 651/2014 of 17 June 2014, the so-called General Block Exemption Regulation, and apply to the categories of fraud referred to in Article 1.

The permitted aid is permissible because it has to be approved by the European Commission under the TFEU Article 108.

Among the permitted support can be included the *de minimis rule*. In a way, it is not state aid. According to Kincl (2012), this rule can avoid the issue of state aid. This is the limit of funds that an enterprise can receive in a given period without breaking the aid rules. The possibility of adapting the *de minimis* rule is regulate in the TFEU in Article 109 and in Commission Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Articles 87 and 88 of the Treaty to *de minimis* aid. Pursuant to this Regulation, the total amount of *de minimis* aid granted to one enterprise may not exceed EUR 200 000 over three-year period.

The illicit state aid is the one that is granted without the approval of the European Commission.

4. Conclusion

The subject of this paper was the issue of permitted and illicit export support at WTO and EU level. Attention was paid to WTO law in this area and subsequently to EU law where compliance with WTO rules is required. In addition, the EU's role in the WTO itself has been included. The main aid of this paper was to explain the support of export at global level through the WTO and at European level through the EU.

The liberalization of trade at global level began with the establishment of the GATT, later on the basis of this Agreement the WTO was created. In the field of trade in goods, in addition to observing the rules laid down by the GATT, Member States must also comply with the Agreement on Subsidies and Countervailing Measures and other agreements relating to this area. In this Agreement are enshrined the basic rules on permitted and illicit aid in the light of the WTO. There are defined the prohibited, actionable and non-actionable subsidy.

At European level, rules are set at EU level, which must comply with the rules established in the WTO. The basic regulations are already contained in the TFEU itself, where the Common Commercial Policy is enshrined. It regulates tariffs, concludes customs and trade agreements on trade in goods and services, unifies liberalization measures, export policy and trade defence measures (dumping, subsidies). The regulation of permitted and illicit support at European level is enshrined directly in the TFEU.

In conclusion, the aim is to evaluate the situation of providing this support in the Czech Republic on the basis of theoretical knowledge related to legislation in the area of providing permitted and illicit export support. As stated in the article, pro-export policy is left to the hands of individual states. In the CR, the strategic framework of pro-export policy is formed by Export Strategy of the Czech Republic 2012 - 2020. The strategy summarizes the overall vision of the state's pro-export activities, their objectives and measures. However, any

agreements in the field of export support, which the CR approves and issues, must comply with all relevant international obligations that the CR adopted - both as a member of the EU, WTO member, even the OECD member and other international organizations. International rules ensure, that exporters from different countries do not compete with the extent of state aid, but only with the quality and price of their goods and services. The article mentioned the agencies (ECAs) through which the government can support exports. In the CR, this position is held by the Export Guarantee and Insurance Corporation and the Czech Export Bank.

As is evident from the article, there are strict rules regulating state aid. It is always important to know whether state aid is involved and whether it is permitted or not, in order to avoid large sanctions. The European Commission will give us 100% assurance and confirmation of the existence of illicit aid.

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Factors of Investment Attractiveness in Czech Municipalities: Theoretical and Empirical Evidence

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Abstract

The issue of investment location is an important area of decision-making of towns and regions, but also of individual investors. Identification of the key factors that towns can offer to potential investors – supply side of location process, is crucial to their future long-term development and competitiveness. The aim of the paper is to contribute to the discussion and to extend the existing knowledge on the theoretical foundations and empirical results of the research dealing with the importance of supply side factors for the investment attractiveness in Czech regions and towns. Results of literature review and conducted analysis showed factors that are important for investors, according to towns and the factors that towns themselves offer to investors at the sufficient level. These factors are: good geographical location, sufficient infrastructure, favorable land prices, quality of workforce, quality of business environment, low wage requirements and prestige of the place.

Keywords: attractiveness, factors, investment, regions, towns

JEL Classification: C80, M16, M30, O18, R11, R12

1. Introduction

The issue of investment location is an important area of decision-making of towns and regions, but also of individual investors. Identification of the key factors that towns can offer to potential investors (location conditions and the life quality of towns and regions) – supply side of location process, is crucial to their future long-term development and competitiveness. In the European Union (EU), the major differences among nations and regions arise due to structural deficiencies in key factors of competitiveness - inadequate endowment of physical and human capital, as well as lack of innovative capacity and effective business support. Especially, the weak performance of the Central and Eastern European countries (CEE) that accessed the EU in the year 2004 led to stronger spatial inequalities and increasing number of backward European areas (Víturka, Žítek, Klímová and Tonev, 2009; Smełkowski and Wójcik, 2010; Staníčková, 2014; Capello and Perucca, 2015). The Czech Republic together with other CEE countries have suffered from structural weaknesses, that are more intense in lagging regions, which lack the necessary endowments to compete with other regions at intra – and inter – country level. Lagging countries and regions pursue policies to promote economic development, the diverse economic and political tools and institutional solutions in the management. They include, among others, assistance for technology and innovation, help for restructuring industries facing difficulties, support for entrepreneurial activities and incentives to inward investment (Kokkinou and Psycharis, 2005). Growing international

competition and new approach in regional development has accelerated the movement of regions from an exogenously driven phenomenon, mostly based on foreign direct investment attractiveness (see e.g. Hlaváček, 2015), to a more endogenous pattern of growth, led by local, intangible structural assets, like knowledge, trust, common rules and sense of belonging, as is the case in western regions. The competitiveness of regions thus rests from the availability of material resources to the presence of immobile local resources like local culture, image, attractiveness, competence, innovative capacity (Staníčková, 2014; Poledníková, 2017). As Viturka and Šlegel (2018) mentioned, the increasing importance of quality of life for residential attractiveness together with investment attractiveness are the basic determinations of territorial development.

Investors and enterprises belong among the most important target groups of both regions and towns (Sucháček, 2016). The demand side of location decision-making is quite common interest of regional experts, see e.g. Sucháček and Baránek (2011) or Sucháček, Urmínský and Škapa (2018) who deal with the spatial distribution of largest corporations and their location preferences in the Czech Republic. The factors according to which a company decides where it locates its production were described for example by Dunning and Lundan (2008). Contrary, the supply analysis, i.e. factors offered by different territories (towns, regions), were neglected so far, see e.g. Sucháček (2013a or 2013b), Maier and Tödtling (1997).

In line with the previous text, the main aim of the paper is to contribute to the discussion and to extend the existing knowledge on the theoretical foundation and empirical results of the research dealing with the importance of supply side factors for the investment attractiveness in Czech regions and towns. In the paper, the methods of qualitative survey, analysis, synthesis and comparison are used to get the relevant results.

1.1 Theoretical Background of Investment Location

Generally, there are two views on the location decision-making. First, there is a specific demand side represented by enterprises and investors that demand certain characteristics and qualities of territories. Second, location conditions of individual territories constitute a specific supply side. Final shape of investments naturally displays interplay between supply side and demand side. Contrary to general economic categories, this supply and demand has a spatial dimension. (Sucháček, 2013a)

Location factors underwent the certain evolution. In the history, land played the crucial role in the sphere of location factors. Nonetheless, with an intense industrialization drive, the importance of land declined distinctively and demand for the availability of the raw materials strengthened. Development of transportation and lowering the transportation costs stood behind the loss of importance of raw materials. (Sucháček, 2013a)

Later on, globalization, rapid technological change (information and communication technologies), an ageing population and new knowledge economy have belonged to external factors which have changed and reallocated traditional sources (Staníčková and Melecký, 2014; Chuchrová, Vilamová and Kozel, 2016). Huge development of technologies made many factors nearly ubiquitous but we still cannot disregard the substantial role of place and space. Companies are simultaneously intensely local and intensely global. It follows that we are increasingly entitled to talk about the process of so called *glocalization* that involves both global and local aspects. (Sucháček, 2011) Generally speaking, ascent or descent of individual location factors is dependent on the development of economy itself.

1.2 Factors of Location Decision-making

Location decision-making is complex process because of the enormous number of conditions and factors that should be taken into consideration when locating enterprise or investments. Maier and Tödtling (1997) show that relevance of location factors is dependent on the activities and preferences of the company in question. Motivation for the location can range from costs minimization to entering the new markets. (Sucháček, 2013a, pp. 718-719) Different location factors are analysed thoroughly at each territorial levels. In case, the demand at the higher territorial level is accommodated, the location decision-making moves to the lower territorial level (see Sucháček, 2013a; Maier and Tödtling, 1997).

Investors (usually large enterprises) demand particular qualities of territories. They search for concrete location factors they treat important in order to maximise the efficacy of the investment (e.g. Dunning and Lundan, 2008). On the other hand, territorial units (municipalities, regions, states or even supranational regions), offer spatially enormously differentiated qualities. These qualities, such as infrastructure, characteristics of the labour, agglomeration economies, proximity of competitors, investment incentives and many others subsequently entice not less differentiated interest of individual investors (Maier and Tödtling, 1997; Sucháček, 2015; Sucháček, 2016; Staníčková and Melecký (2018).

In contemporary turbulent economic environment competition among towns, cities and regions is getting similar to that at the enterprise level. European studies show that all regions are not equally able to face the challenges that the new competition affected by changes in the international environment proposes and thus create favourable business conditions for companies and to increase the standards of living of the population. From this perspective, positioning is of utmost importance. Thus, territorially specific qualities are gaining new significance. Moreover, towns, cities and regions are looking for their own competitive advantages, which favour them over their competitors (Staníčková, Melecký, 2014; Sucháček and Sed'a, 2011; Staníčková and Melecký, 2018).

2. Problem Formulation and Methodological Approach

The main aim of the survey consisted in the analysis of those factors that influence investment attraction at the level of municipalities in the Czech Republic. In contrast with individual enterprises towns constitute a specific supply side of these factors which was taken into consideration within the survey. The whole survey was conducted in 2019 and it follows the research made in the year 2011, see (Sucháček, 2013; Sucháček, 2016; Balčiráková, 2019).

The research was designed as qualitative survey, when perception and attitudes towards individual factors were measured. The data collection method was designed as electronic questioning in combination with telephone questioning. Basic sample for the research was acquired via internet sites of individual towns. Basic sample for this research consisted of 272 towns with population over 5 thousand. Altogether 94 valid questionnaires returned to the researchers, which gives the rate of return approximately 33.7%. The questionnaire first reached representatives of individual towns via email. In case, the given representative did not respond in the first or second call, he or she was contacted through telephone call.

The survey itself was accomplished by means of structured questionnaire. Likert scale ranging from 1 to 7 proved to be the most pertinent one for such kind of research. The higher number means the higher intensity of the phenomenon concerned. The obtained results were subsequently transformed to the percentage, which is useful for further comparisons and interpretations. Some of the questions were formulated as open.

3. Results and Discussion

We investigate what is the opinion of towns about the preferences of the demand side of investment location and the respective intensity of the factors offered by towns representing the supply side of the location decision-making. Table 1 shows the results of those factors that are offered by individual towns on the one hand and the opinions of towns about location factors, which are regarded as relevant by investors on the other hand.

Table 1: Average Evaluation of Location Factors Offered by Towns to Investors and Town Opinions on the Importance of Location Factors for Investors in the Year 2019

Factors	Evaluation of factors provided by towns to investors (%)	Rank	Evaluation of factors expressing opinions of towns about importance of location factors for investors (%)	Rank
Good geographical location	69.9	1	74.8	2
Quality of environment	65.2	2	46.8	15
Infrastructure	60.1	3	77.8	1
Cultural amenities	58.9	4	43.4	16
Image/prestige of the place	56.6	5	52.8	11
Quality of entrepreneurial milieu	54.8	6	59.6	7
Price of land	55.5	7	66.7	5
Local work force quality	52.1	8	66.1	3
Low wage demand	50.7	9	56.0	9
Proximity of suppliers	49.3	10	60.3	6
Availability/quantity of work force	49.3	11	66.7	4
Proximity of customers	48.0	12	55.5	10
Proximity of competitors	45.7	13	50.2	13
Availability of raw materials	38.5	14	50.7	12
Investment incentives	33.2	15	58.3	8
National policies	33.0	16	47.9	14
Average total	51.3		58.35	

Source: authors' calculations (2019)

The main important factors provided by towns to investors are: good geographical location, quality of environment, good state of infrastructure, cultural environment and image/prestige of the place. On the other hand, the least important advantages offered by towns to investors are proximity of customers, proximity of competitors, availability of raw materials, investment incentives and national policies.

As it can be seen in table 1, factors provided by towns to investors and opinions of towns about the preferences of investors find themselves in discrepancies. Good geographical location and infrastructure are considered as factors that increase the investment attractiveness of the town.

Towns consider local work force quality, availability/quantity of work force, price of land and investment incentives as preferences important for investors but at the same time are unable to adjust to these preferences. It was found that the higher the number of job opportunities, the higher attractiveness of the town. Therefore, if towns want to attract new investors, they should focus on sufficient job opportunities. On the other hand, according to towns' opinion, cultural amenities, image/prestige of the place and quality of environment do not influence the investment attractiveness of the towns.

As it was mentioned, starting businesses and entrepreneurs represent one of the most vital sources for urban economies (Sucháček, 2013). In case that potential investor addresses the given town there should be prepared systematic plan or algorithm of official steps following from the side of the town. In case there is not such a plan, investor will probably contact next, possibly competitive town. Strikingly enough, our research revealed that 49 % towns did not prepare such a plan or sequence of steps. These towns should change this situation. For example, they can design a person who will response to a potential investor in time or hand over documents to the relevant departments of regional government, etc. The urban marketing activities are also an important factor. It was found that marketing activities are less dependent on donation from European funds or other European grant titles (towns dependency is 42.7.%). This situation can be positive because towns are now more self-sufficient from perspective of future sustainability. It may also indicate low awareness and knowledge of subsidy titles.

4. Conclusion

In the European context, supporting competitiveness of nations and their regions, requires structural reforms and creating framework conditions to develop the necessary infrastructure, human capital, technology and the implementation of an appropriate and transparent legal framework for the business environment and efficient markets that can help to attract talent and investment to the regions and cities. (Kokkinou and Psycharis, 2005; Staničková and Melecký, 2018) Enterprises are the backbone of the European economy. Since enterprises and entrepreneurs are also loyal to their territory and create stable, local employment, the presence of a strong entrepreneurial ecosystem is beneficial to regions and towns by reinforcing their social and economic tissue. Regional and local authorities therefore have not only a crucial role to play in supporting their businesses, but also a clear responsibility towards them (Committee of the Regions, 2015).

This paper paid attention to the supply side of location decision-making and usage of qualitative data that is severely omitted in the investigated area. Results of conducted analysis focusing on 272 Czech towns in the year 2019 showed factors that are important for investors, according to towns, and the towns themselves offer to investors at the sufficient level: good geographical location, sufficient infrastructure, favorable land prices, quality of workforce, quality of business environment, low wage requirements and prestige of the place. Factors that towns should focus on are: investment incentives, national policies, availability/quantity of work force, availability of raw materials and proximities of suppliers, customers and competitors. The future research will be orientated to the comparison of the results in the year 2019 and 2011, not only on the side of towns and cities but also among self-governing regions in the country. Further research can be also focused on the attracting investments in other, smaller Czech municipalities.

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The Theory of the Fiscal Decentralization and Its Impact on the Economic Growth

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Abstract

Financial responsibility is a core component of decentralization. If local governments and private organizations are to carry out decentralized functions effectively, they must have an adequate level of revenues –either raised locally or transferred from the central government– as well as the authority to make decisions about expenditures. In many developing countries, local governments or administrative units possess the legal authority to impose taxes, but the tax base is so weak and the dependence on central government subsidies so ingrained that no attempt is made to exercise that authority. This paper deals with the theoretical foundations of fiscal decentralization and its impact on economic growth. The methodology of empirical research based on panel regression is also outlined, when it explains the variable expenditure indicator of fiscal decentralization. The paper is based on an overview of existing literature on the subject and shows the direction of further research by the author.

Keywords: *economic growth, European Union, expense indicator of fiscal decentralization, fiscal decentralization, local government revenue and expenditure, tax autonomy*

JEL Classification: *E62, H70, H71*

1. Introduction

The term “fiscal decentralization” refers to an increase in taxing and/or spending responsibilities given to subnational jurisdictions. In many cases of fiscal decentralization, additional layers such as states, provinces, and regions are created. A related term, “fiscal federalism,” is an advanced form of fiscal decentralization.

Until recent years, countries seemed to be divided into two relatively distinct groups: the “federal” and the “unitary.” In federal countries such as Argentina, Australia, Brazil, Canada, Germany, India, Nigeria, Russia, and the United States, subnational governments have important and independent responsibilities for public spending and taxation. These responsibilities are often outlined in each country’s constitution, which explicitly recognizes the existence and the powers of the subnational jurisdictions. In unitary countries such as France, Japan, and Chile, on the other hand, spending and taxing decisions are made mostly at the level of the national government, although some spending may be carried out by decentralized agencies or institutions acting on its behalf. This form of administrative decentralization should be distinguished from fiscal decentralization that generally includes some decentralization of political decisions.

The second chapter deals with decentralization and its theoretical basis. There are also types of decentralization outlined and fiscal decentralization explained. The last part of the second chapter describes fiscal decentralization and its impact on the economic growth. Last chapter

deals with methodology and data. The aim of this paper is to describe theoretical foundations of fiscal decentralization and to outline its impact on the economic growth.

2. Literature Review

In general, decentralization is understood in several ways, here are two definitions that may seem very similar at first glance, but their content is a bit different.

The first definition is used by the World Bank and reads:

„Decentralization transfers authority and responsibility of major government functions from central to sub-national governments — including local governments, civil society, and the private sector. “

This definition understands decentralization as a process closely linked to public administration or the government sector. This is in line with the majority view of the importance of the concept of decentralization.

The second definition is as follows:

"Decentralization is a process that is linked to the transfer of competencies and responsibilities to lower hierarchical levels of a given organizational structure. “

In the second definition, decentralization is understood more widely, not only for the public sector, but more or less for any organizational structure, especially corporate. With corporate decentralization, we encounter mainly large international companies that transfer part of their competencies from headquarters to local branches. It is mostly the goal of a better understanding of the market.

If we are talking about the degree of decentralization, we mean by this term a state of decentralization of a given territorial or organizational unit. Decentralization can take place vertically or horizontally, and vertical decentralization is a more useful way, particularly in the context of recent public administration reforms. Vertical decentralization is the transfer of powers from higher to lower levels of a given hierarchical structure. Horizontal decentralization is then the transfer of powers between units at the same hierarchical level. This horizontal decentralization can only take place at lower hierarchical levels, because the highest level is only one.

At this point, it is important to note that decentralization is a long-term and gradual process that is different from state to state. At the same time, there is no ideal and universally applicable degree of decentralization. This is based on historical traditions, the social customs of a given state, and the mentality of its inhabitants. However, international and multinational organizations, such as the Council of Europe, the EU and the OECD, have a major influence today on the form and degree of decentralization.

2.1 The Tendency of the Decentralization

Tanzi (2001) states that decentralization tendencies are rooted in four causes. First, deepening democratization has given more voice and weight to the preferences of specific groups or regions. The view that fiscal decisions made at the local level better reflect citizens' preferences—than, say, decisions made by politicians or officials in often distant capital cities—has been a common assumption on the part of those pushing for more fiscal decentralization. It has been argued that decentralization decreases the power of those with less knowledge of local preferences and increases the power of those with more knowledge.

When a country's population is culturally, ethnically, or linguistically diverse, the rationale for giving different regions more control over their political and economic decisions seems to acquire more legitimacy.

Second, globalization is creating market areas that are no longer identical with national territories. In the past, when countries' economies were mostly closed, the market area relevant to most individuals or enterprises was the national market. With globalization, certain geographical areas within a country have become more closely linked economically to the markets of other countries than to the national market. In a way, globalization has both relaxed economic links among regions of the same country and increased links between those regions and other countries. This process by itself may have increased the desire on the part of some regions to become economically less dependent on the national government. At times, for example, the elected officials of Lombardy in Italy have been acting as if Lombardy was an almost independent country. The same has happened with Quebec in Canada and with the Basque Province in Spain.

Third, in the jargon of economists, decentralization may be like a "superior good," which becomes more desirable when incomes increase. As countries become richer, they may demand more of it. If this assumption is correct, decentralization will become even more popular in future years.

Fourth, as incomes and the flow of information increase and as differences in income levels across regions within countries rise, the richer regions become more aware that, through the tax system and spending programs, some—or at times a lot of—income redistribution is taking place from the richer to the poorer regions. This realization leads to demands on the part of the richer regions to reduce the role of the national government and to increase that of the subnational governments. In the Northern Italian regions, this phenomenon has been the driving force for greater fiscal decentralization.

2.2 Types of Decentralization

If we talk about decentralization, we usually mean a certain type of it, although we may not even realize it. In the following lines, we characterize the basic types of decentralization. However, it is important to realize that these individual types are intermingled and complementary, and without each other they cannot function effectively and correctly.

The first type of decentralization is administrative decentralization, the essence of which is the transfer of certain responsibilities and powers from central government to territorial self-government. Together with the transfer of responsibilities, sufficient funds should be transferred to ensure their operation. In administrative decentralization, we distinguish three basic forms, namely deconcentration, delegation and decentralization.

Political decentralization, which is another type of decentralization, aims to "give citizens and their elected representatives more power in deciding on issues of public interest and allowing them to have greater influence on the formulation and implementation of public policies". In practice, political decentralization means allowing citizens to elect their representatives to all levels of government. Citizens are here people who know the local circumstances, who, by choosing a candidate, can express their preferences. Respectively, he chooses a representative whose opinions and convictions are as close as possible to their views and beliefs. This type of decentralization promotes democratization in society.

The third type of decentralization is economic decentralization, also called market decentralization. Its essence is to maximize the transfer of functions and responsibilities from

the public sector to the private sector. For this purpose, it is used by privatization, deregulation and total liberalization of the economic environment. With a high degree of economic decentralization, we could meet with the post-communist states, or in Great Britain under the reign of Margaret Thatcher.

The last, the fourth, and the most important type of decentralization is fiscal decentralization. Its aim is to ensure the provision of public funds at lower hierarchical levels so that these levels can be performed by government delegated functions. The transfer of funds is usually delayed over the transfer of responsibilities and competencies. Even though any reform of the public sector, which has been accompanied by decentralization efforts in almost every country, is always linked to discussions and reflections on the size of the redistributed resources. If we reform the public administration and do not provide sufficient funds for its decentralized units, we have reformed, resulting in a long-term unsustainable situation.

The distribution of funds from public budgets has its own rules. This allocation should take place in a transparent form, the amount of funds allocated to individual decentralized units should be predictable in the long term and should be deducted or calculated in any way. Revenue collection methods for decentralized units should be set by law, ensuring their transparency and the possibility of at least partially estimating their amount. The most frequent revenues of territorial self-governments are subsidies and tax revenues, either shared or entrusted.

For decentralized units to perform their delegated functions correctly and efficiently, it is important not only the volume of funds but also the ability to dispose of them at their discretion. Local government revenue (mainly in the form of subsidies) should not be tied to a specific purpose.

2.3 Decentralization of Fiscal Functions of the State

Fiscal decentralization is closely linked to the decentralization of the fiscal functions of the state, and this decentralization is based on the generally accepted concept of these functions, which was first formulated by R. A. Musgrave.

The stabilization function aims to achieve a so-called magical quadrangle, with the help of monetary and fiscal policy, to achieve the smallest unemployment rate, price stability, high rates of economic growth (or sustainable economic growth), and balanced payment balance. This function should be performed and managed only by the central government. This, however, does not mean that lower levels of government should not try to help. They can develop many kinds of different activities, especially in the sphere of unemployment. They can encourage the creation of new jobs, try to attract new investors, create a suitable environment for business, eg by creating new infrastructure or by improving existing ones, by creating business zones, by striving to create a friendly environment for entrepreneurs by acting, by trying to quickly accomplish all the formalities needed to set up and others.

The income of members of a society is not the same, and the amount of each other varies. It is in that society how this inequality is perceived and consequently also the degree of redistribution in society. In general, the redistribution rate will be low in the US and, on the contrary, very high in the Scandinavian countries. The redistribution function is therefore intended to reduce income and equity differences in society, but not to completely erase them. The second goal is to create motivation to improve your own skills to improve your income and increase your assets. These objectives are to a large extent contradictory and the correct setting of the relationship between them is very difficult task.

Even with the redistribution function, the majority believes that the central government is appropriate for its performance. It is neither desirable nor effective for lower decentralized units to determine the actual amount of different benefits and transfers, which would also entail the need to determine their own tax rates. This whole system would lead to a large population migration within the state and end to the collapse of the whole system.

The allocation function deals with „the provision of goods and services that are a public good at a given time“. When deciding on what level a public good is to be provided, the government must consider many criteria, among which the most basic ones are:

- economies of scale,
- matching the territory where the public property will be used with the territory to cover its operating costs,
- the principle of subsidiarity, that requires that the problem can be dealt with by the lowest possible level of governance that is competent for such a decision,
- the ability of locals to participate in decision-making and control processes related to the use of public goods,
- ensuring equal access to public goods for all.

Ideally, local public goods should be covered by local taxes and fees. This requirement is to increase citizens' awareness of the price these public goods cost, thus eliminating the so-called fiscal illusions. The above decision criteria are contradictory, with some supporting centralization, while others are decentralized. In general, there are public goods that should be provided centrally (the army) and then those that should be provided at a decentralized level of so-called local public goods (local lighting, police, municipal waste collection, water and sewerage networks, local communications, etc.).

The allocation function is the main reason for the decentralization of power in the state. Local governments know better the needs and preferences of their people, so they can provide local public goods more efficiently than the central government can do. In this context, we talk about allocation efficiency (the optimal combination of outputs with the most effective combination of inputs). The local delivery of public goods leads to a better degree of control from the local people, while allowing local specifics to be considered and then to come up with innovations. According to theory, people move until they find a village with the best combination of public goods for them. At the same time, there are arguments against the decentralization of the allocation function. The most common ones are the loss of economies of scale, the emergence of externalities or the natural monopoly.

2.4 The Fiscal Decentralization and the Economic Growth

To tease out the relationship between fiscal decentralization and economic growth, it is useful to refer to Musgrave (1959), who has indicated the main economic functions of government should focus on: macroeconomic stability, efficiency in public finances and guaranteeing an equal income distribution. Economic performance and growth is then indirectly affected though the impact of fiscal decentralization on these three factors. Macroeconomic stability is done through fiscal and monetary policy, which can imply some deficit spending. The efficiency with which this can occur depends on various kinds of multipliers and whether one holds a neo-Keynesian or a neo-Classical view of the world. But the ability of a government to engage in counter-cyclical stabilization policy and its implications for unemployment and hence the structural or natural rate of unemployment can have an impact on the natural rate of output and hence on long run economic growth.

It is clear from neoclassical growth theory that the key determinants of economic growth are technological progress and the process of capital accumulation, which in turn depends on savings. Other factors may influence these processes, such as infrastructure, human capital accumulation and institutional design. Oates (1993) conjectured that better targeting of growth-enhancing infrastructure investment under federalism could raise an economy's growth rate, which triggered a series of empirical papers with mixed results. But only recently, a more systematic theoretical framework to think about these issues has been developed (e.g. Brueckner, 2006). The key mechanism is that federalism affects the incentive to save and hence the capital accumulation in the economy, which affects growth. Brueckner (2006) shows that decentralization allows public good levels to be tailored to suit the differing demands of young and old consumers in different jurisdictions, which increases their incentive to save. This in turn leads to an increase in investment in human capital and eventually to faster economic growth.

From the decentralization theorem of Oates, we can also infer that under decentralization efficiency should improve. Martinez-Vazquez and McNab (1997) argue that better matching individual's preferences could have an additional effect through increased work effort, savings and investment, which in turn leads to higher economic growth. Likewise, if the local provision of public goods improves the technical or producer efficiency by offering better quality and larger quantities of the public good, it can foster innovation in the production and supply of public goods. This in turn affects economic growth positively.

3. Methodology and Data

The methodology of empirical research will be based on panel regression. Future dissertation will deal with panel data from years 2006 to 2016 in EU countries. They consist of 28 states. The explanatory variable will be the fiscal indicator of fiscal decentralization. Expenditure decentralisation (EXPD) is the ratio of sub-central to total general government spending. The explained variable will be the GDP growth rate (RGDP) and nominal GDP per capita (GDP) expressed in Purchasing Power Standard per inhabitant. In the future dissertation, many variables such as total revenue and expenditure, unemployment, number of secondary graduated, DDCs expenditure in various sectors, investment etc. will be used as control variables.

Data will be collected from published sources of OECD fiscal decentralization database and Eurostat database.

3.1 Regression Analysis

Methods of regression analysis are usually used in situations where we are interested in the dependence of a certain quantitative (continuous) variable on one or more other quantitative (continuous) variables, the so-called regressors. It is given in advance which variable is independent (explanatory) and which is dependent (explained, also called response). The aim of regression analysis is to describe this dependence using a suitable (mathematical) model.

According to the number of independent variables, we distinguish between single regression and multiple regression models. Simple regression describes the dependence of the explained variable on one regressor. In contrast, multiple regression solves a situation where the dependent variable depends on more than one regressor. Depending on the type of regression function, linear and nonlinear models can be further distinguished. This project deals with panel regression, where the data are in time series, but also in cross-section. The mathematical formulation of panel regression looks like this:

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \dots + \beta_k X_{kit} + \varepsilon_{it} \quad i = 1, \dots, n; t = 1, \dots, T. \quad (3.1)$$

Where Y is the dependent explanatory variable, the parameters of the model are β and ε is the residual component that describes the effect of random or unobserved regressors and the effect of chance. By introducing this random variable, the original deterministic model becomes a stochastic model and an econometric model emerges.

3.2 The Least Squares Method

The least squares method, we start from the sum of the squares of the differences between the measured values y_i and \hat{y}_i the values calculated using the regression function, into which we substitute the values of the independent variables from the observation matrix X:

$$\sum_{i=1}^n v_i (y_i - \hat{y}_i)^2 = \sum_{i=1}^n v_i (y_i - f(x_{i1}, x_{i2}, \dots, x_{ik}; b_0, b_1, \dots, b_m))^2, \quad (3.2)$$

where are the weights that we attribute to individual deviations. We usually vote $v_i = 1$. We are looking for ones $\{b_j\}$ that minimize the sum of squares of deviations. We say that $\{b_j\}$ we found by the least squares method. If the weights of v_i are not equal to one, it is a weighted least squares method. In addition to the sums of the squares of the residual values, other criteria are used to assess the quality of the interleaving, eg the sum of the absolute residual values, the maximum of the absolute residual values, etc.

4. Conclusion

There is no big result in this paper on the significant positive impact of fiscal decentralization on economic growth. However, the paper dealt with the theoretical foundations of fiscal decentralization. There are types of decentralization and decentralization of fiscal functions in the state written in the paper. In conclusion, the goal of the paper was to outline the impact of the fiscal decentralization on the economic growth. This paper outlined also the methodology and data for the future dissertation. The future research will deal with particular countries of the European union in specific time period.

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The Nature of Development Aid Effectiveness and the EU's Approach Towards it

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Abstract

The actions to increase effectiveness of development aid are crucial due to the twofold role of the EU's development assistance, namely, as a tool for closing gaps in development, overcoming poverty and assisting economies of developing countries in getting involved in the world economy, and as important means for shaping its global role. This paper provides an overview of the issue of development aid effectiveness in general. It presents also the EU's approach towards aid effectiveness and examines the EU's actions towards it. Analysis and synthesis were applied interchangeably in the research and were based on the on the basis of official documents of the EU and professional literature on the subject.

Keywords: *aid effectiveness, development assistance, European Union, international organisations*

JEL Classification: *F35, F53, F55, F63*

1. Introduction

Development cooperation and development aid hold an important place on the international agenda and in the European Union's strategy. Development policy is the backbone of the EU's external policy, and its main goal is to eradicate poverty, support sustainable development, as well as solve environmental and climate problems. As such, it addresses the most important challenges of the modern world. The European Union and its Member States provide over half of global development aid, which makes them the world's major donors of such assistance. However, similar to other areas of EU activity, development cooperation faces many internal and external challenges. These challenges mean that the issue of the effectiveness of development aid, understood as the impact of such aid on achieving specific development goals, is becoming more and more important in the discourse on development aid.

The authors of the paper intend to join the current of international discussion on this topic, discussing the issue of the effectiveness of development aid, in particular the approach to the effectiveness of this type of assistance in the European Union, and focusing on the actions taken by the EU to increase it.

Contemporary EU studies focus primarily on the changing role of this organisation in the global economy and its internal problems, and less often on issues related to EU development policy. The latter approaches also lacks consideration of the aspects related to the current activities of the European Union to improve the effectiveness of development aid. The authors aspire to fill this gap. The purpose of this study is to examine the activities of the European

Union after the year 2000 in the area of increasing the effectiveness of development aid. The paper presents the most important concepts of development aid effectiveness, contemporary challenges related to development aid, as well as the latest EU actions taken to increase the effectiveness of this type of assistance. In the paper, the authors analysed the activities of the European Union to increase the effectiveness of development aid, in particular in the context of the most important contemporary challenges of development aid. The theses presented in the paper and the conclusions drawn constitute the authors' own views. The study used analysis and synthesis alternately, which were both carried out using quantitative methods and comparative and descriptive analysis of specialist literature and official EU documents. Data for analysis of the results of research and *ex post* evaluation was obtained from annual EU reports. The study was completed on December 31st, 2019.

2. Effectiveness of Development Aid – the Nature, Evolution of Concepts and Challenges

The effectiveness of development aid relates primarily to the impact of this aid on achieving development goals, which include economic growth, poverty reduction and, as a result, overall economic and social development. This development is understood not only as an increase in the level of GDP, but also as an increase in the standard of living of residents and the development of basic institutions of modern society. Such a broad approach to development goals, the implementation of which is influenced by a number of economic, political or ethical factors, results in the lack of an unambiguous position in the literature concerning the definition, nature and methods of assessing the effectiveness of development aid.

The effectiveness of development aid has been the subject of scientific discourse and public debate since the 1970s. A comprehensive review of the literature in this field has been carried out by H. Hansen and F. Tarp (Hansen, Tarp, 2000), D. Roodman (Roodman, 2007), P. Guillaumont and L. Wagner (Guillaumont, Wagner, 2014), A. Bigsten and S. Tengstam (Bigsten, Tengstam, 2015), or SB Uh and Md. R. Siddiky (Uh, Siddiky, 2017), and others. In Poland, the issue of effectiveness of development aid has been mainly dealt with by P. Bagiński, K. Czaplicka, J. Szczyciński (Bagiński, Czaplicka, Szczyciński, 2009), B. Sobotka (Sobotka, 2009) and M. Zajączkowski (Zajączkowski, 2019). The most important studies on the effectiveness of development assistance include the work of C. Burnside and D. Dollar, in which the authors showed that development aid has a positive impact on the economic growth of the recipient country under the condition of well-conducted fiscal, monetary and trade policies, as well as strong and stable state institutions (Burnside, Dollar, 1997, p. 33). In 2000, H. Hansen and F. Tarp reviewed the existing concepts of development aid effectiveness, and as a result introduced a division into three generations of research on this subject (Hansen, Tarp, 2000, pp. 377–391): (1) the first generation, in which research is focused on the importance of development aid for the accumulation of capital, as well as investments and savings treated as conditions for the effectiveness of this type of assistance; (2) the second generation, in which the focus is on researching the relationship between development assistance and economic growth; (3) the third generation, in which other factors such as economic policy and state institutions play the key role in the effectiveness of development aid.

In subsequent years, researchers of the issue systematically expanded the catalogue of factors affecting the effectiveness of development aid. For example, W. Easterley, R. Levine, D. Roodman (Easterley, Levine, Roodman, 2004) questioned the view that the stability of economic policy and state institutions is a sufficient condition for the effective use of development aid. Similarly, J.E. Antipin and G. Mavotas (Antipin, Mavotas, 2006) argued that

the impact of development aid on economic growth, reduction of poverty, and economic and social development varies depending on the specific conditions of the recipient state. In 2009, M. Balamouné-Lutz and G. Mavrotas showed that both the institutions and social capital are significant when seeking to increase the effectiveness of development aid and lead to political and social transformation (Balamouné-Lutz, Mavrotas, 2009). Hence the general statement that aid and its instruments should be tailored to the individual needs of the recipient of development aid.

Studies on the effectiveness of European Union development aid take a particular place in the subject literature. Most often, however, the issue of efficiency is complementary to other issues – for example, the process of Europeanisation of development policy and development aid (e.g. Orbie, Carbone, 2015; Timofejevs Henrikssohn, 2015; Lightfoot, Szent-Iványi, 2014), or the issue of the importance of EU development aid in shaping its position on the international arena (e.g. Holden, 2016; Carbone, 2013; Zajączkowski, 2010; Farrel, 2008). In many studies on EU development aid, the authors are more likely to emphasize limitations to the effectiveness of this aid. For example, K. Arts and K.A. Dickson point to the lack of coherence and effective coordination mechanisms between different policies, directorates and services in the EU, which could mean competitive priorities (Arts, Dickson, 2004, p. 7). S. Grimm also points to the role of coordination, adding ambiguously formulated development policy objectives which hinder the measurement of development aid effectiveness and organisational structure within the EU, in particular insufficient staff, lack of strategic documents and inflexible administrative procedures, to the catalogue of the most important restrictions (Grimm, 2008, pp. 13–16). Other issues are also present in the literature of the subject. J. Verschaeve and J. Orbie draw attention to the relationship between the EU and the OECD DAC Development Assistance Committee for the effectiveness of the activities of both organisations (Verschaeve, Orbie, 2018, p. 15–17). M. Carbone, in turn, analyses the importance of joint programming for the effectiveness of EU development aid (Carbone, 2017). In addition, E. Kovářová stresses that the discourse about the EU development aid provided for African states is influenced by the external factors, especially bilateral character of Africa-China relations (contrary to EU multilateralism) or Chinese loans given to African countries. She states that China can be the right stimulus for new form of EU-Africa relations (E. Kovářová, 2014, p. 351).

As the main objectives of development aid are to combat poverty in developing countries and to strive for sustainable and long-term economic growth, it is difficult to determine aid effectiveness through the interdependence between the costs incurred and capacity to achieve goals associated with aid (Deszczyński, 2011, p. 90). While the end of poverty in the context of the Johannesburg Declaration on Sustainable Development, the Millennium Declaration and the Agenda 2030 is the consensus end of development, there is also a consensus as it comes to the principal means, namely economic growth and good governance that act as growth accelerators (Fukuda-Parr, 2007, p. 11). Hence, the effectiveness measure recognised in the professional literature is the link between the aid usage and economic growth per capita. The overwhelming majority of recent empirical studies find that economic growth would be lower in the absence of aid, and additionally, that aid is associated with higher public expenditures including those pro-poor than would otherwise have prevailed (McGillivray, 2005). In other words, poverty would be higher in the absence of aid. Nevertheless, links between the aid and poverty eradication though proven are often questioned as: (1) economic growth is influenced by numerous factors independent of aid donors (i.e. bad governance, the absence of transparency and the rule of law) and (2) the aid actual impact can be spread over time since time horizons of different actions vary a lot. Moreover, aid in its nature is scattered over different economy sectors, therefore, it is difficult to categorise its results (Fryderek, 2010, p.

207). For instance, due to widespread corruption and failed governance in aid recipient countries, funds are not spent according to the purpose and do not reach target aid beneficiaries. The phenomenon of aid reallocation to the public sector not in line with the donor's intention might lead to fiscal leniency and, finally, to the reinforcement of misrule and power of the privileged (Kopiński, 2011, p. 190). Developing countries often lack also suitable resources to implement aid programmes which results in bottle necks, namely the demand generated by aid cannot be satisfied in the environment of unbalanced supply of production factors (that include organisations and human resources) (Kopiński, 2011, p. 187). The coherence of donor development policies is a condition that translates into the effectiveness of development aid. Every year the number of entities (governments, agencies and banks) providing development assistance increases or the scope of their support for and engagement in assistance activities changes.

The increase is accompanied by increased activity of non-governmental organisations and constant fluctuation in the ranks of recipients – the assistance system consists of many participants, each of whom should have a qualified administration responsible for handling assistance programs (which is a particular challenge in small countries characterised by a labour deficit). To reduce the burden on beneficiaries, countries providing support should strive for harmonisation, i.e. reduction of formalities on the part of recipients, including by making clear and transparent agreements between donors with each other, aimed at relieving recipients of the problems of coordination and evaluation of aid activities (Fryderek, 2010, p. 200). In addition, the increase in the number of new donors gave developing countries an opportunity to establish new partnerships, which complicated the issue of aid coordination, although a kind of "natural" division of labour has gradually emerged on site, with European donors focusing on social aspects and new donors focusing on infrastructure.

3. Actions Aimed at Improving the Effectiveness of EU Development Aid

In 2019, in a report entitled "Annual Report 2019 to the European Council on EU Development Aid Targets", the EU Council alerted that EU development aid has been decreasing for two years in a row. For example, in 2018 it was about EUR 730 million less than in 2017 (CEU, 2019, p. 4). In addition, the EU Council underlined that the EU and its Member States should intensify their efforts to increase the effectiveness of development aid, in particular through better cooperation, a wider use of the joint programming framework, as well as joint implementation of aid instruments and joint assessment of the results of implemented actions (CEU, 2019, p. 7).

Reforms on increasing aid effectiveness go back to the year 2000 when the Millennium Development Goals were adopted and for the first time the results of aid interventions and their effectiveness were assessed. Then the 2003 Rome Declaration on Harmonisation with a special focus on harmonising aid efforts between donors and the Paris Declaration on Aid Effectiveness of 2005 followed setting five key rules, namely: ownership of aid strategies by beneficiaries, alignment of donor aid actions and strategies of beneficiaries, harmonisation of actions taken by various donors, results-orientation, mutual accountability of donors and partners for development results (OECD, 2017, p.1). It was reinforced by the 2008 Accra Agenda for Action which focused on accelerating progress on aid effectiveness by means of addressing three major challenges: country ownership and leadership over development assistance combined with higher predictability of aid, more effective and inclusive partnerships between all development actors through better management and coordination, and tangible results of development efforts with open accountability for these results (OECD, 2017, p. 15–16).

The above-mentioned calls for action to increase aid effectiveness were reconfirmed in the 2011 Busan Outcome Document in shared principles to achieve common goals (the significance of country ownership of development priorities, focus on results, inclusive development partnerships, transparency and mutual accountability) which form the foundation of cooperation for effective development (Busan Partnership for Effective Development Co-operation, 2011). Moreover, the “inclusiveness” is a real differentiator as the Busan statement for the first time gets society organisations involved in drafting the outcome document and acknowledges the complementary roles of civil society organisations, private stakeholders, parliaments and local governments (Martini et al., 2012, p. 931).

After Busan the Global Partnership for Effective Development Cooperation (GPEDC) was established. The GPEDC has become a global multi-stakeholder forum which brings together all actors relevant for development cooperation, including traditional donors, developing countries, emerging economies, civil society, local government, philanthropic foundations and the private sector (GPEDC, 2017). The first High-Level Meeting of the GPEDC in 2014 resulted in the final Mexico Communiqué (GPEDC, 2016) “Building Towards an Inclusive Post-2015 Development Agenda” which aims to push forward effective development co-operation in support of a global development agenda to follow the Millennium Development Goals after 2015 (GPEDC, 2014).

The second meeting in 2016 focused on the implementation of the Agenda 2030 and in this context the achievement of the Sustainable Development Goals (SDGs). In terms of effectiveness the Agenda 2030 substantiates a need for a new integrated approach towards the SDGs stressing the interdependencies between individual goals. It recognises that the eradication of poverty, a combat against inequality, preservation of the planet, creation of the sustained, inclusive and sustainable economic growth and promotion of social inclusion are closely interlinked with each other (UN, 2015, p. 5) and only addressing them together is effective.

The EC plays an active role in the GPEDC and DG DEVCO as a member of the Steering Committee. As the EU is committed to deliver the SDGs based, i.a. on the broad range of means set out in the Addis Ababa Action Agenda on Financing for Development, the effectiveness of development cooperation is more important than ever. Therefore, it is so important to ensure that all resources are used as effectively as possible. Under the “EU Common Position for the Fourth High Level Forum on Aid Effectiveness” the EU has identified the following priority areas for development effectiveness: (1) establishment of an EU Transparency Guarantee to increase accountability and predictability; (2) strengthen democratic ownership and improve development results; (3) implementation of joint programming at the country level to reduce aid fragmentation and promote harmonisation, reinforcement of delivery, accountability, measurement and demonstration of sustainable results; (4) commitment to a new approach towards situations of conflicts and fragility; (5) greater public-private engagement for development impact.

In 2017 the European Parliament, Council of the EU and the European Commission introduced a “New European Consensus on Development – Our world, our dignity, our future” in which they confirmed the commitment of the EU and its Member States to apply the development effectiveness principles agreed in the Global Partnership for Effective Development Cooperation during the Busan High Level Forum on Aid Effectiveness in 2011 and renewed during the High-Level Meeting in Nairobi in 2016 (EU, 2018).

The EU monitors the development aid effectiveness at different levels. First of all, it contributes to the Global Partnership for Effective Development Co-operation Progress Report, which presents indicators that capture the essence of the four internationally agreed

principles for effective development co-operation (OECD/ UNDP, 2019, p. 14). The EU, on a regular basis, examines also the performance of the EU Institutions and EU Member States covering themes from use of partner country systems through quality of dialogue, involvement of civil society, predictability and transparency of funding and financial management, gender equality and tied aid (Consortium BKP Development Specific, 2019).

The report on the EU development effectiveness covers data from the 2018 monitoring round and is focused on four aspects of programming development cooperation support to partner countries, namely (Consortium BKP Development Specific, 2019): (1) alignment of development partners' strategies and projects to country-led development priorities and results; (2) forward visibility of development co-operation, including its annual and medium-term predictability and its recording on partner countries' budgets; (3) use of partner country public financial management systems and; (4) progress made in untying aid. According to the Report, in general, the EU has not been making progress in development aid effectiveness dimensions since 2016. For example, for the indicator "Extent of use of country-owned results frameworks and planning tools by providers of development cooperation", which is the only indicator used to measure respect for the partner country's policy leadership and space to establish and implement its own policies for poverty eradication and sustainable development, the EU performance was above average, with a slight increase from 61% (2016) to 62% (2018) thanks to several positive performers such as Finland (from 70 to 80%), Germany and Italy improved (from 60% to 70%) and Sweden (from 50% to 60%) (Consortium BKP Development Specific, 2019, p. 10). However, when it comes to "Strengthening transparency of development cooperation information as an important step to enhance accountability" the EU and its Member States performed worse i.a. on the Creditor Reporting System, reducing a fifth in two years from 61% performing 'good or better' to 50% in 2018; by comparison the GPEDC 2019 report shows an average of 79% as good or better in 2018 (up from 72% in 2016) (Consortium BKP Development Specific, p. 23).

The EU systematically takes steps to make the development aid more efficient i.a. by taking part in the International Aid Transparency Initiative and developing a transparency portal EU Aid Explorer, reducing donor fragmentation through EU Joint Programming, launching the EU Results Framework ensuring effective monitoring and reporting of EU aid, getting engaged in the New Deal for Engagement in Fragile States, fostering Public-Private involvement through an engagement framework (EC, 2017). However, the latest reports shows that some aspects of programming development cooperation need to be amended.

Additionally, it is worth mentioning that systematic revisit of the Busan principles and the development results need to be carried out by the EU. The internal actions should be combined with the evidence from partner countries presenting what the aid actually changed on the ground, how it improved impacts or saved resources (Benfield, Como, 2019, p. 7).

4. Conclusion

The European Union is the largest donor of development aid in the world. According to the report of the European Commission entitled "2019 Annual Report. On the implementation of the European Union's instruments for financing external actions in 2018", the EU and its Member States allocated EUR 74.4 billion to development aid in 2018, which is more than half of global spending on this goal (EC, 2019, p. 7). The EU also systematically takes steps to make the development aid more efficient. The effectiveness of development aid may be defined as the impact of this aid on achieving development goals, which is not only an increase in the level of GDP, but also an increase in the standard of living and the development of basic

institutions. Such a broad approach to development goals results in the lack of an unambiguous definition of development aid effectiveness as well as standard methods of increasing this effectiveness. Therefore, this problem is considered by many researchers, also in relation to the European Union policy.

Reforms on increasing development aid effectiveness were launched in 2000 when the Millennium Development Goals were adopted and for the first time the results of aid interventions and their effectiveness were assessed. The European Union has been actively involved in this process through numerous actions.

First, the EU has identified the priority areas for development aid effectiveness. These priorities include i.a.: establishment of an EU Transparency Guarantee to increase accountability and predictability; strengthening democratic ownership and improvement of development results; implementation of joint programming at the country level and promoting harmonisation, accountability, measurement and demonstration of results; greater public-private engagement for development impact.

Second, the EU systematically takes steps to foster the impact of development aid. The European Union has joined the International Aid Transparency Initiative, makes efforts to reduce donor fragmentation through EU Joint Programming, has launched the EU Results Framework ensuring effective monitoring and reporting of EU aid.

Third, the EU monitors the development aid effectiveness at different levels. It contributes to the Global Partnership for Effective Development Co-operation Progress Report, as well as, on a regular basis, examines the performance of the EU Institutions and EU Member States in the area of development aid.

However, according to the latest reports on development aid, the EU has not been making progress in development aid effectiveness since 2016. It is worth mentioning that systematic revisit of the Busan principles and the development results need to be carried out by the EU. The internal actions should be stronger combined with the evidence from partner countries presenting what the aid actually changed on the ground, how it improved impacts or saved resources.

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Migration Impact on the Economy of the Republic of Moldova

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Abstract

Migration flows in Europe have been the focus of attention over the past five years, due to the massive intensification of the influx of migrants into the European Union, often referred to as the migration crisis. Migration is a characteristic process of a modern economy that has a major impact on development on both destination and origin countries. The primary objective of our research is to analyse the growing economic importance of migration to the European Union for the Republic of Moldova. We investigate the influence of the international movement of labour on the source country and analyse the inflow of remittances, their sources (European Union and others) and the impact on the development of the Republic of Moldova.

Keywords: *European Union, international movement of labour, migration, remittances, Republic of Moldova, real estate prices.*

JEL Classification: F22, F24, F66

1. Introduction

Globalisation of the world brought intensification of production factor movement. Migration is one of the most discussed topics in context of the current vast migration inflows in European Union. Authors like Tendera-Wlaszczuk (2016) state that in response to crisis communities tend to move to a higher level of integration. On the other hand these tendencies are influencing the perception of the European Union's institutions calling for democratisation of the decision making in the EU (Balabanov and Lendzhova, 2018), because of solitary actions such as Germany's "Refugees welcome" and the migration agenda behind the Brexit (Ganoczy, 2018). Authors like Zickgraf (2008) are researching the objective changes in the environmental ecosystems that drive migrations flows. Migration is a characteristic process of the modern economy, which has a major impact on development. There are evidence that migration is increasingly important for developed countries with ageing population, for example Austria with its low natality and high migrant inflow (Čiefová and Raneta, 2018).

Moldova remains one of the poorest countries in Europe with almost one million Moldovans working abroad (mainly in Europe, Russia and other countries). International migration has become an important topic for politicians and scientists. At the same time, the issue of migration flows is the most important economic phenomenon for the Republic of Moldova, whose economy in the post-Soviet period was deindustrialized and currently relies heavily on its agricultural sector and on the inflow of remittances (1,2 billion USD p.a. which is almost 15% of GDP).

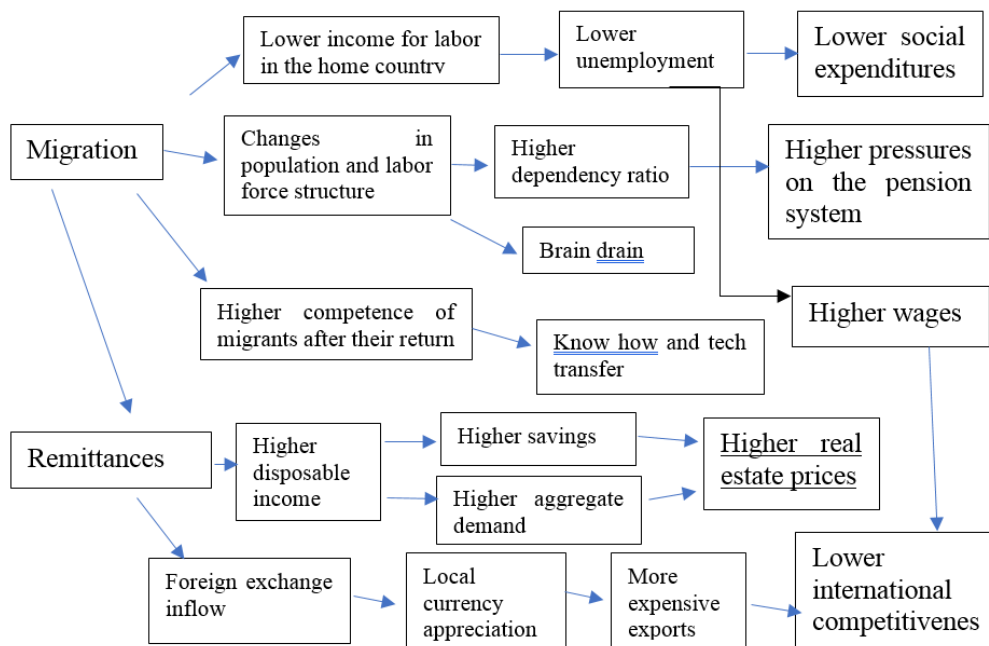
The aspirations of a better future and the motivation of higher earnings, as well as other incentives that trigger the movement of Moldovan citizens. Scientists analyse flows of

migration to discover patterns in order to formulate relevant policy recommendations on this phenomenon. For the Republic of Moldova, labour migration and remittances are relatively recent phenomena. Substantial remittance flows occur after the year 2003, when the monthly inflow began to exceed USD 30 million, this was the criterion for periodization of the analysis chosen by the authors as starting year for the analysis. This paper seeks to examine aspects of the impact of remittances on the economy of the Republic of Moldova and may represent a further step towards the increase of the knowledge needed to implement an effective economic policy.

2. Problem Formulation and Methodology

The issue of migration is a very important phenomenon for the economy of the Republic of Moldova. Stratan and Chistruga (2012) focused on the theoretical aspects of the impact of migration on the Republic of Moldova. International organizations such as the International Center for the Development of Migration Policy (2006, 2013) or International Organisation for Migration (IOM, 2010) also analysed migration in Moldova and conducted a very detailed empirical researches using an extensive family questionnaire with members abroad that helped identify the consumer and investment preferences of remittance recipients.

Diagram 1: Theoretical Summarization of Effects of Migration on the Sending Country



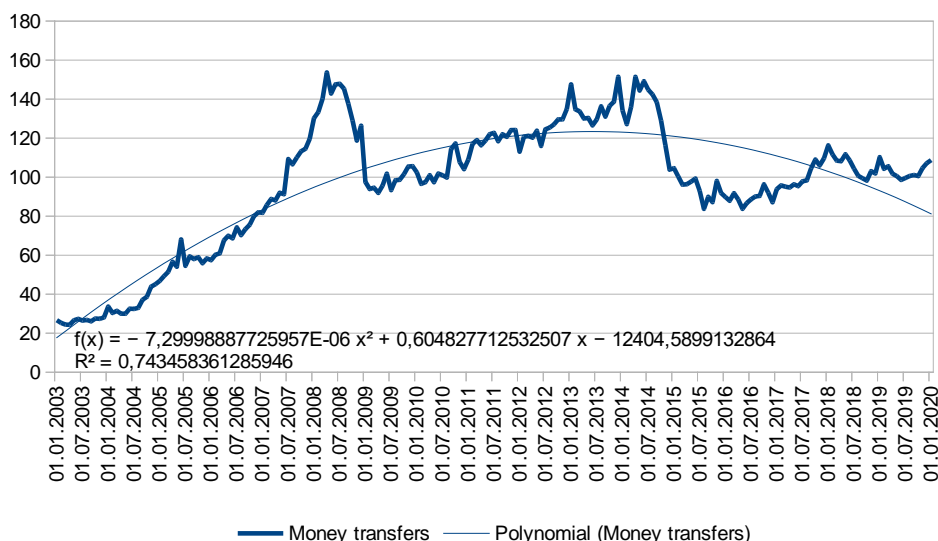
Source: authors own representation of theoretical background.

The international movement of labour has the following impacts on the source country: Demographic implications. Migration can have a profound impact on population size, structure and growth. These effects can affect the growth rate of the population in the long term (Massey, 2009). Social consequences (IOM, 2010). Migration can have a significant impact on the culture of society. These effects vary depending on the type and duration of migration. Economic consequences (Diagram 1). Migration can have a significant impact on the economy

(Portes, 2001). These effects vary according to different types of migration, migrant skills and length of time abroad (Stratan and Chistruga, 2012). Political implications (Ganoczy, 2018). Migration can also affect policy, depending on the education and age of migrants (Zaharco, 2015).

Migration and remittances have a huge impact on the Moldovan economy. These impacts can be divided into two cause-effect constructions: **a.** the first part are consequences on the labor market and characteristics of the workforce (see Diagram 1); **b.** the second part are the consequences of the influx of remittances on the economy. In this paper, the second part of the cause-effect sequence shown in Diagram 1. The aim of the paper was to determine the impact of monthly inflows of bank transfers on private individuals (which is a derived indicator of the Central Bank for inflows of remittances) and the development of average prices of m² on the real estate market in Chisinau. The logic behind the study is that additional foreign exchange inflow raises aggregate demand, savings and afterwards finds its way to the real estate market raising the prices (this is the base hypothesis).

Figure 1: Monthly Inflow of Remittances to the Republic of Moldova (mil. USD)

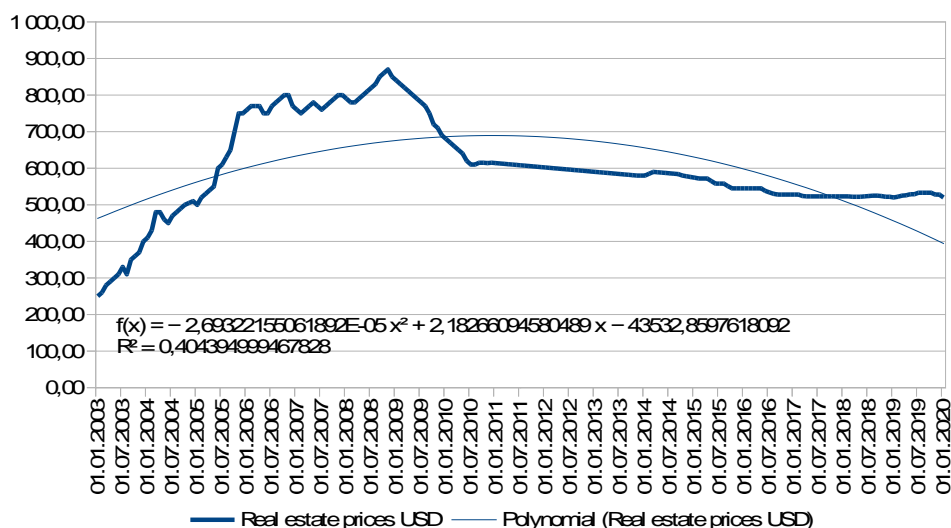


Source: Central Bank of Moldova (2020), <http://bnm.md/ro/content/analiza-grafica-transferurilor-de-mijloace-banesti-efectuate-favoarea-persoanelor-fizice-81>

International Centre for Migration Policy (2006) in the CBS-AXA study included a sufficiently large number of household respondents who had migrants for work related. For example, some negative aspects of labour migration have been identified, such as: harder working conditions, emotional stress and lack of parental attention. At the same time, this study also identified recipient's spending preferences for remittances. Households receiving remittances from abroad spend them on daily consumption such as TVs, refrigerators or computers, and the balances are directed to the purchase of cars and **real estate**. We have chosen to confirm this questionnaire finding (redirecting remittances to real estate) as a hypothesis for our regression analysis.

The analysis of the inflow of remittances to Moldova in the context of the development of property prices in the capital of Moldova underlines the following fact: the recent increase in remittances has coincided with the increase in real estate prices, from which we can conclude that as an investment.

Figure 2: Data on Monthly Average Real Estate Prices (USD per m²)



Source: Processed by the author based on the data collected from the monthly studies published by the real estate broker "LARA" (LARA, 2020).

Between 2000 and 2007, the volume of remittances increased nearly tenfold (\$ 0.1 billion in 2000 to nearly \$ 1 billion in 2007 as shown on Figure 1). At the same time, property prices in the capital of Moldova have risen almost sevenfold (\$ 120 / m² in 2000 to \$ 820 / m² in 2007). At the end of 2008 and during the first half of 2009, there was a decrease in the volumes of remittances inflows into the Republic of Moldova, a de facto delayed manifestation of the economic and economic crisis which manifested itself in late 2008 and continued in 2009. The decrease in remittance inflows in the first two quarters was 30% and 65% compared to the first and second quarters of 2008, a cumulative decrease of 32% or in the first two quarters a remittance inflow of 241 million. USD less than in 2008 (see Figure 1). This represents 3.92% of GDP, the decline in GDP in the first half of 2009 was -7.7%, indicating the importance of remittances for Moldova's economy. It was the time when remittances inflows achieved their highest relative values on the GDP (almost one third of GDP).

The decade after the financial crises was a turning point when the flow of remittances stopped its growth and turned trending downwards. Comparing the two figures (Fig. 1 and 2) it can be seen that there are two distinct periods, before and after the 2008 crises. By the end of 2008, the economic crisis caused a fall in remittance volumes, which, with a certain delay, had an impact on average real estate prices. The increase in disposable income also increases the demand for capital goods, which include real estate.

As for visual analysis goes, when comparing the two time series (Fig. 1 and 2) it is clearly seen that real estate prices did not recover after they topped in 2008, even despite a spike in remittances around the year 2014. An important question for our research was: What is the

statistical dependence of property price developments in the capital of Moldova on the inflow of transfers from labour migrants.

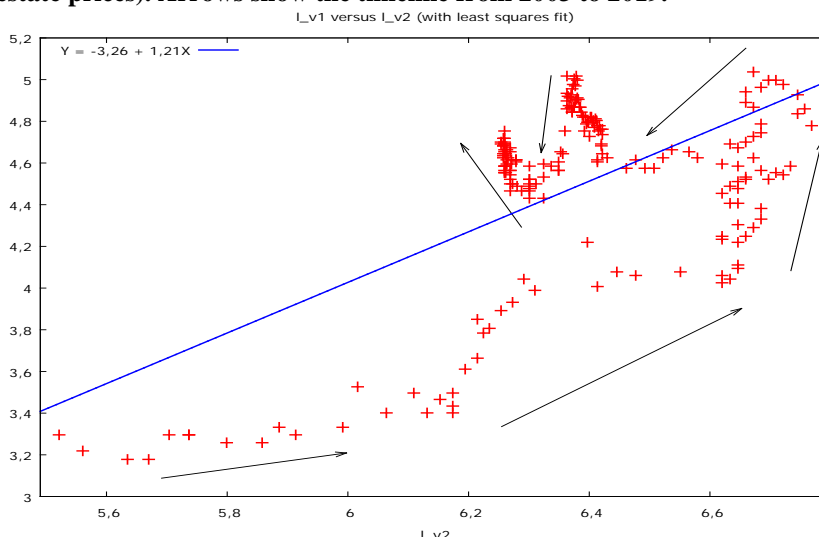
2.1 Model and Data

In order to be able to verify the dependence of remittances and property prices by regression analysis, we used the Central Bank of Moldova's data on monthly transfers to private individuals and the average price of a square meter in the capital of Moldova, Chisinau. The time period of the analysis was conditioned by the availability of data (from 01/01/2003 to 01/01/2020) for a total of 205 monthly observations. Regression analysis was performed in econometric software (Gretl 2019d) using a log-log linear model (OLS).

Model 1: OLS, using observations 2003:01-2020:01 (T = 205)

Dependent variable: l_v1					
	Coefficient	Std. Error	t-ratio	p-value	
const	-3,25601	0,722202	-4,508	<0,0001	***
l_v2	1,21389	0,113231	10,72	<0,0001	***
Mean dependent var	4,481388	S.D. dependent var		0,460422	
Sum squared resid	27,61278	S.E. of regression		0,368814	
R-squared	0,361490	Adjusted R-squared		0,358345	
F(1, 203)	114,9277	P-value(F)		1,55e-21	
Log-likelihood	-85,39745	Akaike criterion		174,7949	
Schwarz criterion	181,4409	Hannan-Quinn		177,4831	
rho	0,986236	Durbin-Watson		0,031169	

Figure 3: Scatterplot of l_v1 (log monthly remittances) vs l_v2 (log of monthly average realestate prices). Arrows show the timeline from 2003 to 2019.



Source: author's calculations using GRETL 2019d software.

As it was stated in the previous section of the paper, it is possible to identify two separate periods. First until the year 2008 when remittances achieved numerous 30% share on GDP.

This period is characterised by a strong dependence of the real estate prices on the inflow of remittances (the left part of the charts from Fig.1 and 2).

Regression analysis of the whole dataset showed that there is a significant statistical relationship between remittances and average real estate prices, which is confirmed by the P value. The interpretation of the coefficient makes it possible to argue that an increase in the monthly inflow of remittances by 1 mil. USD causes an increase in the average price of m² in Chisinau by 1.21 USD. However, we must emphasize the fact that the coefficient of determination (0.36) indicates that the model explains less than half of the cases, which is a weak indicator. We see the cause of the low R-squared value as a result of the financial and economic crisis, which has changed the spending patterns of the recipients of these financial flows, as can be seen in Figure 2.

In order to identify the dependence of house prices on remittances during the post-crisis period, which would somewhat filter out the turbulence caused by the crisis in the world economy, we conducted another regression analysis using data from 01/01/2003 to 01/12/2008. In this very simple way, we want to mitigate the exogenous effects on our analysis (72 observations in total). These changes allowed us to significantly improve the statistical relevance of the model, as reported by P. The value of the coefficient of determination increased substantially (0.71). At the same time, we can see that the coefficient has also increased (4.04).

We can interpret the findings as follows: an increase in the monthly inflow of remittances by 1 mil. USD caused the average price of m² in Chisinau by 4,03 USD. From this it is evident that in the pre-crisis period property prices responded more strongly to the growth of remittance income. And the overall importance of the remittances for Moldova was overwhelming.

After the year 2008 the flow of remittances despite some volatility remained reasonably stable but the share part of remittances on GDP was constantly declining. In 2019 it constituted a 20% drop to roughly 11% of GDP nominal and even less in purchasing power. The Association agreement with the European Union signed in 2014 and implemented from 2016 shifted the international trade of Moldova towards the EU (65% of exports) and began to attract growing amounts of FDI.

3. Conclusion

In conclusion, the remittance flow to the Republic of Moldova is more than €1,2 billion. USD per year, which is a huge factor of economic development for the state with a population of 3.6 million. Some one million Moldovans are working abroad. Remittances are playing and are likely to play an important role in the Moldovan economy and social life, but their weight in GDP is constantly declining. This growth factor reached its limits around the year 2008 when it constituted the main driving force of the development. At the same time, it represented risks to the sustainable development and qualitative transformation of the Republic of Moldova's economy. Currently it is fair to say that this grow factor is in decline and is being replaced by the growing exports to the EU and increasing inflows of FDI after the signing of the Association agreement.

Regression analysis using a log-log linear model showed a relevant statistical dependence of the development of property prices on the influx of remittances, but it is obvious that this linkage was stronger in the past and is becoming less and less significant. This finding has far-reaching consequences, as the high dependency of the Republic of Moldova on the influx of remittances is declining it also creates challenges for the political elites that should concentrate

on the improvement of the business environment and corruption reduction to push other growth factors rather than relying on remittances.

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Transformation of Innovation Ecosystems: the Case of Ruhr Area and North East England

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Abstract

Ruhr area and North East England represent steel and coal-mining regions that experienced economic crises and faced numerous negative lock-ins in the past. These regions had to undergone transformations and restructure their industries with focus on research, development and innovation and today rank high in the Regional Innovation Scoreboard. The objective of this article is to discuss the process of innovation-based transformation of their regional economy. During the analysis, the assessment of regional innovation system, its instruments and other relevant successful economic development factors will be conducted. European institutions approved the European Green Deal that suggest creation of Transition fund for heavy industrial regions in European Union, most of them situated in Central and Eastern Europe. The aim of the article is to outline implications and best practices for regions that will have to face the decline and disappearance of their traditional industries thus providing new empirical evidence for supporting innovation policy.

Keywords: *innovation instruments, innovation policy, old industrial regions, success factors, the transformation process*

JEL Classification: *R12, O32, O38*

1. Introduction

This paper focuses on the role of Ruhr Area and North East England and the process of their innovation-based transformations. Both areas are the typical examples of old industrial regions that can be marked as underdogs in the process of globalization. However, they are also examples of regions that hindered their industrial history and negative lock-ins and transformed themselves into new development trajectories. Regions represent the critical level within the framework for shaping innovation capacity. Innovation-based regional growth and development is the main theme in regional theories across Europe. (De Bruijn and Lagendijk, 2005) Old industrial regions represent a symbol of the decline in production and performance of regional economies and have thus become the centre of attention and debate in regional development theories. Thanks to path dependency and lock-in principle theories, we can answer the questions of the old industrial regions' highly innovative transformation. Issues connected to old industrial regions are relevant to public economics to justify public policies and interventions. Problematics of old industrial regions were researched by important experts in the field of regional economies, such as Philip Cooke, Ron Boschma and others.

The paper contributes to the discussion on the role of old industrial regions and their transformation into innovative regional ecosystems by comparing the Ruhr Area and North East England and observing their involvement in policy initiatives to establish functioning

regional innovation systems while facing different problems and challenges related to their industrial history. A largely asked question is, what the policy options should some regions facing massive decline establish? How did the old industrial regions transform? And what steps in terms of public policy initiatives have led to their innovative success? This article aims to answer the preceding questions. The methodology of this article is based on an intensive qualitative approach to enable deeper investigation and will compare the situation of North East England and Ruhr Area and subsequently, discuss the policy initiatives that have been addressed by the regional government to establish successful regional innovation systems (RIS). The comparison of the regions is case-based. The empirical section starts with an identification of each of the region's main problem. This is followed by a discussion of policy initiatives that were set up to improve the functioning of the RIS. The actual comparative analysis is described in the conclusion of the paper. The empirical analysis is based on the assessment of scientific publications and policy documents and accompanied by secondary data acquired from national and European statistic offices to explain the progress of regions' transformations with relevance to the Region innovation index position. Added value is created by interpreting this data in a comparative analysis alongside. It can be argued that the lessons from innovation policy of these regions can provide a stimulus for other old industrial regions to use more innovative elements in the implementation of their regional innovation policy. In conclusion, the main lessons derived from the comparison of cases are presented, and policy implications are discussed. The basis of the argument here is that new forms of innovation policy and innovation instruments can diminish the negative effects of de-industrialization.

2. Old Industrial Regions and the Process of their Transformation

This section describes the problems of old industrial regions located mainly in Western Europe. These regions faced during the last century considerable issues due to the structural changes taking place in the economy. These regions, formerly symbolizing success, faced economic and social consequences of their decline. Some regions have been able to emerge from this situation and have become innovative leaders and can be a model for other regions. In the first section, a brief overview of theoretical frameworks will be described, the second section focuses on the establishment of new old industrial regions in the 21st century.

2.1 An Old Form of Industrial Regions

Old industrial regions represent territories located in developed countries with a significant tradition and historical specialization in industrial production. These regions gradually faced structural changes in the economy, a decline in their position and performance, and subsequent transformation and adaptation challenges. (Boshma and Lambooy, 1999) The traditional sectors that prevail in the old industrial regions are coal, steel, chemicals, textiles and shipbuilding. Well, known characteristics can be described as strong specialization in one or several of the above mention industrial sectors, a thick configuration of knowledge etc. (see also table 1). (Asheim et al., 2019) In these regions, we already find clusters, which include firms with industrial specialization, which are in decline. These are, however, oriented towards declining industries, i.e. the sectors that have been a source of growth in the past and its position have been hampered by both technological changes and changes in the global economy (now creating a barrier to the further development). All innovations (in this case incremental and process) arise in the field of traditional industry and technology, and modern concepts often lack. (Tödtling and Trippl, 2005) The initial strengths that were based on geography and networks, industrial atmosphere, specialized infrastructure and closed inter-firm relations turned into barriers to innovate. (Hassink, 2010) Old industrial regions can be thus rated as

regions of the second league of performance and that did not catch up with the development trends.

Old industrial regions are characterized by the so-called lock-ins, which hinder the region's development and the realization of its innovative potential. Lock-ins are the part of the evolutionary economics that focus on recognition of place-specific elements and processes to explain spatial patterns of technology evolution. (Hassink, 2010) Grabher (1993) defined three lock-ins that can be observed in the old industrial districts. First, a functional lock-in that relates to close inter-firm relationships, particularly between large enterprises and small and medium-sized suppliers hindering the need to develop boundary-spanning functions (research and development or marketing) and thus preventing the region from transforming during the time of structural crisis. Second, a cognitive lock-in that refers to the common world-view or mind-set of workers, suppliers that can confuse trends with real crisis decline. The third lock-in reflects political issues, institutions aim at preserving existing traditional structures thus slowing down the region. This explains how path dependency may cause serious problems in terms of adjustments. Other theories, such as Norton (1979), considered a decline of old industrial regions as a natural phenomenon that can be compared with the evolution of the product life cycle. Boshma and Lambooy (1999) also mention external factors, such as political or technological shocks that cause the decline of old industrial regions. In this respect and concerning the new environmental policy of European institutions, we can add that environmental policy will also influence the decline of coal regions transforming them into old industrial regions.

Table 1: Characteristics of Old Industrial Regions

Problem dimension	Old industrial regions
Industry characteristics/problems	Experiencing decline, large-firm dominance, overspecialization
Firm innovation activities	Few R&D activities, mature technological trajectories, cognitive lock-in.
Universities/research organisations	Oriented on traditional industrial and technologies

Source: author's own processing based on Tödtling and Trippel, 2005

2.2 A New Form of Old Industrial Regions in the 21st Century

The European Union has committed itself to become the first climate-neutral bloc in the world by 2050. This means that all member states and its regions will undergo a profound economic and social transition. The Just Transition Mechanism (JTM) will provide tailored financial and practical support to the most affected regions in the process of their transformation. Just Transition Fund shall receive 7,5€ billion worth investments that will provide grants mostly to coal mining regions. These regions will face risks and negative lock-ins, but in comparison with the previously mentioned old industrial regions, these regions will have to end their coal activities thanks to environment policy not the transformation of economy and influence of "invisible hand". The pilot action for regions in industrial transition will provide support from Commission experts as well as technical assistance from the ERDF. Twelve regions have been selected for EU support. The most affected regions will be Ústí Region (Czech Republic), Western Macedonia (Greece), Upper Silesia (Poland), Horná Nitra (Slovakia) and Sud-Vest Oltenia (Romania). (Proposal for a regulation of the European Parliament and the Council establishing the Just Transition Fund, 2020) It can be argued, that the shift for the affected regions will require new structural and economic policy and the transition of the whole

regional ecosystem. These regions will face a situation that can be compared to the situation of Ruhr Area and North-East England in the upcoming years. These regions can represent examples of good practice and were therefore chosen to be described in this article.

3. Ruhr Area and North East England

The analyse and assessment in the paper are focused on the Ruhr Area and North East England and the process of their transformation with the focus on public policy innovative instruments.

3.1 Ruhr Area

Ruhr Area is an urban area located in North Rhine-Westphalia (NRW) in Germany, it is also known under the acronym Rustbelt. Ruhr Area is the largest old industrial area in Germany and Western Europe that used to be well-developed industrial region primarily focused on coal mining and steel industry. The economy of the region was severely affected in 1970 by the worldwide economic crisis as the German coal and steel sector become no longer competitive and its prices were undercut by lower-cost suppliers. The region had to face many substantial structural changes followed by ecological, social urban problems and negative lock-ins. Hassink (1993) emphasizes the foremost intensive political lock-ins. Policy-makers were thwarted by the opposition of coalition consisting of dominant companies in the region, chambers of commerce and trade unions. Ruhr Area faced innovation deficit and the loss of the homogeneity in terms of economic structure and strength (Hennings and Kunzuman 1990).

First two interventionist policies (Development Programme for the Ruhr 1968–1973, North Rhine-Westphalia Programme in 1975) were structured to mitigate the shock resulting from the contraction in the mining industry, to modernize the coal industry and to renew the infrastructure of the region. These strategies were not successful in reviving the region thus in 1979 Action programme Ruhr was developed by the state government as first time reactive strategy that dealt with the decline of coal and steel industry followed by State Initiative Future Technologies in 1984. The initiative aimed at fostering technology transfer and technological innovation. Since then, we can see the clear shift in the direction of structural and planning policies aimed at restructuring the Ruhr Area that shows the realization problems in the coal and steel regions are not transitory but rather they are an indication of a threshold to a new era which the entire society is confronted with. (Danielzyk, Wood, 2004) In 1989, Future initiative for coal and steel regions in NEW (ZIM) –was introduced by the state of NRW to foster cooperation among regional policy makers with the aim to give them more responsibility based on regionalization thanks to EU funding (delimitation of six regions in the area) cooperation and co-ordination of its activities. Under ZIM, the regional conferences decided, by consensus, on projects and the actions areas such as innovation and technology stimulation; training for the future (qualifications and skills for employees); infrastructural modernisation; improvements to energy and the environment. The focus was a shift to funding technology institutions that provide a range of services for industry, particularly via intermediary bodies and serve as linkages from universities and research centres to SMEs. To promote the intellectual resources a dense cluster of educational institutions, research institutes and universities has been developed. Nowadays, the region consists of industry's 31 R&D centres, technology transfer offices for the promotion of co-operation between science and business (around 50), technology centres for innovative companies (around 50), technology agencies/initiatives supporting specializes business and business innovations (26). Research infrastructure is one of the densest research landscapes in Europe. (Huggings and Thomalia, 2006) In 1989, the IBA Emscher Park initiative was launched by the region, a structural policy aiming at the renewal of the most problematic part of the Ruhr district, the so-called Emscher sub-district. IBA strategy intended to change the urban and landscape quality of the Ruhr

region and regionalize whole structural policy (Danielzyk, Wood, 2004). Priority was not so much given to the economic structure but the urban fabric, to the industrial heritage, to environmental aspects and social welfare. These objectives were accompanied by symbolic territoriality demonstrated inwards and outwards by a focus laid on the housing and leisure qualities and by the intention to raise the regional image. Subsequent initiatives emphasized eight competency fields – energy and environmental industry, mobility/logistics, information and communication, new materials, machinery and plant engineering, microsystem technologies and medical technologies, media and creative industries. These fields of competence shall be developed by different instruments: co-ordinating agencies and institutes, research institutes, inter-industrial networking, initiatives to found new companies, acquisition to close to the production chain, export-promoting policy and training policy. Supported policies focused on environmental industrial activities. Almost half of the German industrial investments in environmental technologies occurred in NRW in the Ruhr Area. (Hilbert et al., 2004) Nowadays, the economy of North Rhine-Westphalia is mostly based on SMEs. The state counts 747.000 SMEs who provide work to about 80% of the active population. Companies are also very clustered (counting 14 clusters in above mentioned competency fields). (NRW Invest, 2019).

3.2 North East England

The area of North East England consists of the counties of Northumberland, Tyne and Wear, County Durham and Tees Valley. During the 20th century, these regions were famous for its focus on coal, mining and heavy industries (shipbuilding and steel). (Middleton and Freestone, 2008) Hassink (1993) concludes North-East England used to be the main coal-mining and industrial centre of Great Britain. The industrial decline in North East England started in late 1950s thanks to the effects of recession and rise of competition from foreign countries. During 1950 and 1970 over one hundred coal mines were closed and the deindustrialization process had begun. (Middleton and Freestone, 2008) Main reasons that caused the industrial decline are over-representation of externally controlled branch factories and the under representation of innovative small and medium sized companies. Firms had also few material links with other firms in the region thus creating the lack of network economy. (Hassink, 1993) The economy still hasn't fully recovered yet. However, there is some progress in terms of the region's effectiveness, the economy is becoming more mixed with an increase in knowledge-based businesses. Technology start-ups figure is highest in the country in comparison with the region's size and skills and improving faster than the national average. Furthermore, the Regional Innovation Index in the period 2011-19 has increased by 11.5 points. The main strengths relate to the sales of new-to-market and new-to-firm innovations in SMEs, non-R&D innovation expenditures, the collaboration of innovative SME's and most-cited scientific publications. (North-East, 2020)

Regional policy firstly focused on the industrial modernisation and attraction of inward investments in different growth sectors such as electronics. It led to regional sector specialisation that focused on assembling and processing operations. Thanks to the process of decentralization that was connected to regional EU funding, the regional development strategy had to be established. (MacKinnon and Phelps, 2000) Regional Development Agency, founded in 1998, had to address the gradual failure of traditional policy and replaced this policy with a new regional economic strategy that focused on building a knowledge-based economy with the universities in the centre of regional thinking. Agency, thanks to the European funded programs, encouraged universities to work closely with firms via funding opportunities. Report "Realising the Potential of the North East's Research Base" (2001) – defined the presence of regional innovation paradox in the area – strong academic research base that is not linked with regional industrial needs, limited absorptive capacity and weak relations between

supply and demand. Innovation, Industry and Science Programme followed the results of the report and focused on three policy measures: the formation of a Science and Industry Council (advice on the RIS), a regional exploitation agency, and five Centres for Excellence. The strategy shifted the focus of the regional policy from large to small firms, from manufacturing to service sector activities, from inward investments to growth. Five centres of excellence were funded in areas with research strengths and industrial opportunities followed by investments funds. Five centres were pillars of the innovation strategy: New and renewable energy centre - (focus on the onshore and offshore wind), Centre for process innovation (ICI research), Centre for Emerging Nanotechnology, Micro and Photonic Systems, Medica centre. (Goddard et al., 2012) The Strategy also created NStar a regional venture capital fund aiming to provide access to finance, proof of concept investments and commercialization advice and assistance. The Strategy focused on supporting the generating academic spin-offs and emphasized cluster policies with a focus on subversive social economies such as LETS (Local Exchange trading system). (Hudson, 2005 and Coenen, 2007) Universities (five universities in the area) collaborated and started the Higher Education Support of Industry in the North initiative (HESIN) that aimed to create an access point for university-based business services and advice. The initiative paved the way for more extensive collaborative agreements and agencies such as the Regional Centre for Industrial Design, the Knowledge House, and the Centre for Achievement in Manufacturing and Management. These centres were aligned with the manufacture oriented industrial base of the region. Very important was also an establishment of Newcastle Gateshead Initiative in 2000, the initiative of councils of Newcastle, Tyne and Gateshead worked together and promoted the culture-led regeneration raising the profile of the region. (Middleton and Freestone, 2008) An Initiative steered private services growth in relevance to tourism, retailing and new forms of consumption and leisure in the region. (Hudson, 2003).

4. Conclusion

The paper aims to highlight the factors that re-shaped the regional innovation system of old coal regions. Two regions in Europe were chosen as the observed units: Ruhr Area and North-East England. The paper assessed the process of transformation of these two coal regions and reflected on the implications of their regional programmes. In both Ruhr Area and North East England, coal and steel industries have experienced a severe decline destroying many traditional forms of activity. These coal mining regions were chosen because of their coal history and follow-up significant transformation thus they can act as examples of good practice. Because of the new European Green Deal policy, we can assume that in the future several coal mining regions will have to undergo similar transformations as well.

Based on previous analysis, we can address the crucial steps every region should follow: change attitude of local actors toward innovation and economic policies (public consciousness need to accept that traditional structures are declining), influence local actor's willingness to act, improve region's image, support more decentralised policies to let the responsibility for regional development issues to regional level and encourage region to become an active subject, focus on the urban area problems as well. We can also highlight concrete activities that are necessary for the region's transformation and are connected to the change of RIS. Therefore, high-quality research infrastructure can be identified as one of the main success factors of the regions. Both regions focused on the establishment of sophisticated and diversified industrial infrastructure and high-tech industries, small and medium sized companies and start-ups. The existence of instruments supporting innovation in the region, such as innovation centres, incubators or other agencies that provide financial and other support to the actors of the innovation system, was also essential. Finally, the support of cluster

policy must be stressed. Clusters contribute to the transfer and flow of knowledge between companies and accelerate the transfer rate, capturing important knowledge and increasing the potential for innovation in regions (Haviernikova et al., 2016). In both regions, we can observe the importance of political leadership, recognizing that focusing only on the traditional industry could lead to lock-in effects. Specific support needs to be offered for boosting innovation, removing investment barriers etc. Support should be focused on economic transformation in line with smart specialisation strategies (e.g. support to SMEs, business incubators, innovation and cooperation of industry and researchers), the reskilling of workers traditionally employed in coal-related sectors. These administrative practices can be adopted in the regions by offering guidance through the process and by making the system more transparent to give businesses greater legal certainty. Both regions also received significant levels of ERDF funds, over half of which have been deployed for ‘enhancing and exploiting innovation’ in addition to national funds allocated to the region.

The success of the analysed regions is also attributed to their unique conditions, other regions can only be inspired by the individual elements of the system that have been mentioned as important and applied regarding local specific conditions. However, these regions are ideal models based on which regions could orient themselves and apply them to their local conditions.

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European Dreams and the Interest of the Average – Change and Inertia in Reforming the Higher Education in Poland

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Abstract

Europeanization of selected policy fields belongs to the well-established subfields of European integration studies. Higher education has also been the subject of numerous analysis examining the internationalisation and Europeanisation pressures and their results. The author of this paper intends to contribute to this stream of research by investigating one element of the Polish higher education reform, namely the allocation of ranking points among the publishing houses and journals. This allocation mechanism is the core of the reform establishing the incentives for scholars in their publishing strategies. This paper will present how the domestic particularisms acted counter-productively to the European ambitions of the Polish academia. Instead of stimulating researchers, it allocated the points among the selected journals in a clientelist and politicised way. As a result, we observe the promotion of the average publication output in many disciplines, which is counter to the reform objectives.

Keywords: Europeanization, higher Education, Poland

JEL Classification: I20, I21, I28

1. Introduction

Europeanization of selected policy fields belongs to the well-established subfields of European integration studies. Higher education has also been the subject of numerous analysis examining the internationalisation and Europeanisation pressures and their results. The author of this paper intends to contribute to this stream of research by investigating one element of the Polish higher education reform, namely the allocation of ranking points among the publishing houses and journals.

The existing literature on policy change would suggest that international and transnational communication, exchange and interaction could foster domestic policy change (Knill, 2005). This statement should hold true predominantly in internationalised sectors, to which academia is estimated to belong to. The Polish case of 2018 reform contests this statement since the implemented changes were driven predominantly by internal factors. Two contextual determinants influenced this inner orientation, the first one being the whole Polish political system became oriented towards itself in general. The second stems from the relative closure of the Polish academia. Apart from some individual cases of successful internationalisation, the Polish academic sector is closed linguistically, professionally and in many other dimensions. The transnational interaction and exchange is rather superficial. On formal level, like implementing the Bologna process norms, it operates relatively well. On functional level, like for example participating in Europe-scale programmes, e.g. Horizon 2020 or ERC grants, it is considerably marginalised (in relative and non-relative terms). Scholarly career and promotion has been still hugely dependant on internal system of *habilitation*, which promotes loyalty to internal stake-holders. The publishing strategies of older as well as younger scholars

focus on the Polish publishing market which is totally disconnected from the international one. In many disciplines there is no single journal title that would gain recognition abroad or at least be indexed by one of the recognised systems. The proliferation of low-quality publications accelerated in unprecedented scale, not only not advancing the research quality in Poland, but being counter-productive to it. The inflation of publications is reflected in their quality and impact factors presented by large portion of Polish scholars. In contrast to the German system, where after the unification of the former German Democratic Republic into the Western German academia, in which close to 100% of the former German Democratic Republic social sciences scholars lost their positions in a competitive process faced with their Western colleagues, the Polish system petrified the old patterns. When the didactic operations got commercialised, the research remained as it was prior-1989 and therefore notoriously underdeveloped which has been reflected not only in international rankings but also publication record of the vast majority of the Polish academics.

Paradoxically, on declarative level, this problem is being addressed by the reforms undertaken in 2018. Such a diagnosis is set and prescriptive strategies proclaimed in order to strengthen the Polish academia also on the research front. However, the implemented solutions are far from optimal. Pushing the system towards more state-centric model resembles the pre-1989 communist approach. Pooling the resources in the centralisation process may bring marginalisation of the majority of the Polish HES institutions. It does not guarantee though the better performance of the few large universities entertaining the pooled resources. The so far cumulation of research funds did not bring any research output that would be internationally recognised. It resulted rather in higher numbers paw-quality publications visible only in local publishing houses.

2. Europeanization – European Dreams under Soft EU's Pressure

The need for Europeanization and internationalisation were used as ones of the key motivations behind the undertaken reform. At the same time, it is needed to underline that in that case Europeanization was understood in a very common (and non-scientific) way. It referred to European aspirations understood as up-grading the Polish academic system to quality level similar to the Western peers. Here, it is necessary to connect this understanding with some basic scholarly conceptualizations of the term.

Europeanisation - once having become a catchword - gained a lot of explanatory potential together with the process of dynamic growth of research and investigation devoted to it. Accompanied to this, we observed a methodological pluralism, which not always served for the benefit of the quality of the scholarly work. Nevertheless, Europeanisation was - and still is - one of the fastest growing strands of European integration studies.

Within the field of Europeanization research, several frameworks have been developed to explain the varying impact of European integration on domestic structures. They are best distinguished by their analytical starting point. A number of studies regard the misfit between European and domestic institutional structures as a key catalyst for domestic change (Featherstone, Radelli 2003; Fojtikova, Vahalik, Stanickova, 2016). Others emphasize European leverage on changed opportunity structures and the potential reorganization of actor constellations at the national level (Graziano, Radelli 2007; Riedel 2018). A third explanatory approach combines issues of institutional compatibility and modifications of domestic opportunity structures (Börzel, Risse, 2000). Moreover, a constructivist-based explanatory framework (Bauer, Knill, Pitschel, 2007, p. 406) are applied and seem to be especially adequate in the case for this analysis.

March's and Olsen's observation that the EU's effectiveness at institution-building and policy change even within the Union has varied across institutional spheres such as competition policy, monetary affairs, external and internal security, culture etc., and thus there is a need for greater sensitivity to the 'dynamics of various institutional spheres and policy sectors' (March, Olsen, 1989). Moreover, Olsen also notes that clear causal relationships between the EU and domestic levels are difficult to trace since causation operates in both directions. Such processes are, he believes, best studied as an ecology of mutual adaptation. This kind of flexible method of case study, it is believed, is the most appropriate method for analysing the application of EU conditionality during enlargement.

Within this scope, three different steering mechanisms of Europeanisation have been identified by Michael W. Bauer, Christoph Knill and Diana Pitschel in their important contribution to this strand of academic discourse — compliance, competition and communication.

The third mechanism – communication – is predominantly applicable in the case of this analysis, it refers to the communication among national regulatory agents grouped together in EU legal or institutional networks. The authors of this classification, Bauer, Knill and Pitschel, suggest that "(...) applying the governance approach of communication, the EU stimulates information exchange and mutual learning between national policy makers. Furthermore, it aims to promote the development of innovative forms and models of problem solution that can be integrated in the member states' regulatory systems. Communication-based measures abstain from setting legally binding rules. Instead they are designed to support national policy makers looking for regulatory models and concepts to tackle policy problems.

'(...) Originally, such a kind of a communication approach was practised in international organizations, such as the Organization for Economic Cooperation and Development (OECD), before it was taken over by the EU. It is marked by its openness and its emphasis on the principle of voluntary participation'. (Bauer, Knill, Pitschel, 2007, p. 414).

Soft modes of governance may act as illustrative examples of governance by communication, including the higher education and science sector in which there is no much compliance pressure from the EU. At the same time the academic systems do not compete among themselves on a market-based rules.

3. Polish Higher Education Sector – Evolution under the Europeanization Pressure?

In this context, it is necessary to see the change and continuity in the evolution of the Polish higher education system. There are many enduring elements in the Polish academic systems. This relative continuity may be observed in some respects already in the pre-IIWW period (Dobbins 2011). Universities are change-resistant institutions petrified by long-lasting traditions, and hierarchical structures based on seniority principle.

After a highly bureaucratic system prior-1989, the Polish educational system was liberalised (Antonowicz, Simonova, 2006) after the social, political and economic transformation leading to a highly market-competitive model. The use of market-oriented instruments were predominantly geared in order to meet the massification demand (Dobbins, 2011) correlated with the demographic trends and to catch up with the un-answered needs of the society under the earlier communist regime.

In 1990s. and 2000s. the massification took place in many, if not most, of the Central and Eastern European states (Naeve, 2003). There have been plenty of research exploring the developments in the Polish higher education, both the private one as well as the public one (Kwiek 2015, Dobbins 2014). Looking at its various fragments at different phases, the scholars classified it or as a classical Humbolt-type model or a market-oriented one. After 1989 the

Polish HES has been subject to a great number of internal and external determinants which had a shaping impact on its governance structures.

First the favourable attitude to the privatisation of public services, embedded in overall liberal Leszek Balcerowicz's shock therapy and its seismic waves, occurred also in the higher education sector. In such an economic climate of 1990s., the continental Europe's largest private university sector exploded nowhere else but in Poland.

The private sector of Polish higher education was essentially developed as a sub-system of the public one. The private HE institutions functioned predominantly as cooperatives of academic teachers. Therefore, the existence and evolution of the private sector could be seen as a function of the shortages of the public sector. With very few noticeable exceptions, the private HE institutions conducted literally no research and they were entirely didactic service offering institutions. Living from tuition fees they competed for the same resources as the public universities, thus creating conflict of interest between and academics very often working in both public and private HE parallel.

The 2018 reform turned the Polish academic system more towards the centralized, statist model. At the same time in the case of scientific research it aimed at advancing the scholarly level to the levels comparable to the Western academia.

4. Counter-Europeanization Case Study

This ambition to realize this European dream hit the ground when it came to the implementation of the reform-driven legislation. This paper intends to investigate one element of the Polish higher education reform, namely the allocation of ranking points among the publishing houses and journals. This allocation mechanism is the core of the reform establishing the incentives for scholars in their publishing strategies. This paper will present how the domestic particularisms acted counter-productively to the European ambitions of the Polish academia. Instead of stimulating researchers, it allocated the points among the selected journals in a clientelist and politicised way. As a result, we observe the promotion of the average publication output in many disciplines, which is counter to the reform objectives.

The publication parametrisation occurred to be the heart of the reform since it was supposed to stimulate the Polish researchers to publish in higher valued journals and publishing houses, which is the case in many academic systems where various h-index are the key criteria for evaluating the quality of the research output. However, instead of nesting the Polish parametrisation system in one of the world-recognised indexes (such as Web of Science, Thompson Reuters, etc.) the ministry decided to continue with its own list of journals and publishing houses and allocating them certain "publication points". So, the logic of the system did not change much, it was much more the new allocation of the publication-points rather than a systemic change. Due to the fact that there are more than 30 000 entries on the ministerial list of journals, experts' panels were called to propose their weighted points allocation in line with some pre-defined criteria, like impact-factor, indexing in recognised data-bases, etc. The whole exercise took a long time and the ministerial list was published much late after the authors have already had the opportunity to submit their papers. Once published, the list rose heated controversies since the allocation of points seem to escape the pre-agreed criteria in many cases. In many of the semi-structured interviews, conducted for the purpose of this research, the panel members claimed that the list that they proposed to the ministry differed substantially from the one that was published finally. The international journals were not the bone of contestation, since they were judged based on the relatively objective impact-factor criteria. The problematic were the domestically based journals that, by vast majority, lacked any indexing. The example of some social sciences journals clearly

shows that some of them were over-valued two or three times in terms of allocated points. On principle, they are journals that are led by the ministerial institutes and not universities themselves. It needs to be remembered that the ministerial institutes, like Instytut Zachodni, or Instytut Europy Środkowo – Wschodniej (and many others) that were first captured by the ‘exchange of elites project’ conducted by PiS (Prawo i Sprawiedliwość / Law and Justice). The same with other scientific institutions – those that are widely recognised as the politically biased, like Instytut Pamięci Narodowej, journals inhabited by right-leaning scholars, like “Przegląd Sejmowy”, enjoyed more points allocated by the ministry. As a result, these scholars who are loyal or sympathizing with the ruling right-wing government in Warsaw gain bonus for getting more points for their publications. Other scholars, targeting at the same high-points journals need to deliver scientific output that not only meets international quality standards, but also is competitive due to the high rejection rates in these journals. A system in which a clique of government-loyal scholars gain access to easily-gain publication-points system resembles the worst practices known from the authoritarian regimes.

However, even without this clientelist politicization, the allocation of points was corrupt in so many ways that it deserves harsh criticism. The new system equalised the infamous chapters in the edited volumes, that were widely recognized as a very low-value for various reasons, with journal articles published in the vast majority of the domestic journals.

As a result, a simple comparison of some exemplification of scholars who publish in a diversified way (in terms of quality of the journals and publishing houses), shows that the new system does not promote higher quality in a sufficient way. An exemplary author who would publish annually one chapter in a top-scored publishing houses (such as Oxford University Press or Routledge) will differ only minimally in his/her evaluations compared to an author who publishes any book in one of the local Polish university houses.

Another example of an author who has access to one of those over-valued journals controlled by the government-loyal scholars, who would publish four articles, shows that he/she is evaluated much better than another scholar publishing on a competitive international market placing his papers in medium impact-factor journals.

The only positive effect of this part of the reform can be seen in the lowest levels of the publishing market. These scholars who would normally publish close to zero scientific output got mobilized to publish anything. However, publishing chapters in local publishing houses already up-grades them to the medium levels in Polish academia.

As a result, it is legitimate to conclude that the new system does not promote high quality scientific output. It up-grades the average (relatively speaking) academics, especially those who have access to politically biased journals. It has some effect on the lowest quality scholars who got motivated to publish anything.

These conclusions remain in a stark contrast to the declared objectives of the 2018 reform. Despite of the fact that this gigantic reformist undertaking changed and destabilised numerous spheres of the Polish academia, it failed in its core element – that is creating a system of incentives to publish the best papers in the best journals. It rather promotes an average or politically biased research output and consolidates the whole Polish academia on the relatively low levels. Which is counter-productive to the declared Europeanization and internationalisation objectives of the reform.

5. Conclusion

Critical analysis of the higher education reform undertaken in 2018 in Poland, clearly shows that the 'European dreams' failed at the altar of the interest of the average. The reform failed in its core element – that is creating a system of incentives to publish the best papers in the best journals. It rather promotes an average or politically biased research output and consolidates the whole Polish academia on the relatively low levels.

The targeted Europeanization and internationalization effect of the reform has not been achieved so far, and the logic of the new system does not promise any advance in this regard. On the opposite, it is rather legitimate to conclude that the new system does not promote high quality scientific output. It up-grades the average academics, especially those who have access to politically biased journals. It has some effect on the lowest quality scholars who got motivated to publish anything.

The failed Europeanization attempts need to be seen in the context of the change and inertia in reforming the higher education in Poland. It has been a long way since the Polish academic sector departed from the communist-type, ideologically driven, over-regulated and to a large extent inefficient system. However, it is difficult to ignore the symptoms of the return to the past. The paradigm changes of 2015 generated the shift in agreed norms as well as believed values, and brought about changes in 2018 higher education system reform. The new political elite taking the rule in the Autumn of 2015 questioned post-1989 order in Poland and promised the elite's change as one of the constitutive elements of the "good change". As a result, the new act on higher education and science was legislated implementing changes that weaken the autonomy of the universities as well as centralise the whole higher education system sector and modify universities' governance structures.

Various degrees of centralisation and state coordination can be observed across the region of Central and Eastern Europe – the Polish model escaped the state monopoly after 1989 and departed towards more market driven solutions. Some authors would even a bit over-optimistically claim the detachment from state monopoly and emancipation (Tucker, 2000) from the structures typical for the previous communist regime. The 2018 reform questions this optimism.

The Polish case is vitally important not only due to the size of the country and the relatively large number of students which make the Polish academic sector a substantial one. In many respects Poland acted as a trend setter in the transitions of many socio-political and economic spheres for the other countries of Central and Eastern Europe. It is contemporaneously a salient element of the illiberal turn happening in the post-communist world (Riedel, 2020). The employed changes in the academic sector should be seen in the broader context of reformation and deformations which have been implemented in Poland since 2015. The anti-elitist rhetoric so popular in the dominantly populist politics serves the de-legitimation of judges, professors and other members of the so called upper-middle class. The revolutionary atmosphere in the country creates a preferable environment for the exchange of elites in many spheres, including the university world.

Putting these conclusions into the context of the Europeanization literature, one needs to appreciate a real challenge for the new generation of scholars trying to disentangle the "net effects" of EU integration. Europeanization, being the result of constant interactions between the national and the European level, or even of horizontal diffusion processes where the EU as such is not necessarily involved, can be confused with numerous parallel processes such as globalization, modernization but also (de)democratisation. The EU policies not only impact domestic policies, but once established, they also alter resources and preferences among

domestic actors, and feed back into further shaping of EU policy. This is clear visible in situations where Europeanization has been used as a concept and as a framework to explain and understand the outcomes of democratization in the new Member States. This also opens some new questions about the utility of Europeanization concepts in studying various cases of de-Europeanization or counter-Europeanization, as exemplified by this case study of one fragment of the higher education reform in Poland.

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Inhabitants Awareness of Selected EU Member States About Renewable Energy Sources

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Abstract

Renewable Energy Sources (RES) has been presented in this paper. RES is an alternative to traditional, primary and non-renewable supports - fossil fuels. Production of renewable energy is an important part of energy sector development. The aim of the article is to present and assess the state of knowledge on renewable energy sources and ecology in selected EU countries. The study uses descriptive, statistical and analytical methods. Further, a survey was used as a research tool. The aim of the study was to try to answer the questions whether and how the state of knowledge of the EU inhabitants about renewable energy sources can affect the development of renewable energy. Based on the obtained results it was possible to draw reliable conclusions about how to promote ecology among Polish society.

Keywords: *inhabitant awareness, knowledge level about RES, renewable energy source*

JEL Classification: *Q20, Q42, Q40*

1. Introduction

Demand for energy increases with economic development, and as a result current energy systems have a significant impact on the environment. For these reasons, renewable energy sources, which are obtained from natural, recurring natural processes, are of increasing importance.

Current energy systems are dominated by fossil fuels (coal, oil and gas) which produce carbon dioxide (CO₂) and other greenhouse gases. Balancing the challenge between development and environment therefore provides us with the ultimate goal of ensuring everyone has access to enough sustainable energy to maintain a high standard of living (Ritchie, Roser, 2018). The global economy's heavy reliance upon fossil fuels is under increasing threat by the dual challenges of supply security and climate change. Transitioning from fossil fuels to renewable energy is recognized internationally as being instrumental in tackling these aforementioned by 2030 (Li, 2020). For example, the EU has adopted a new climate and energy framework which includes delivering a minimum 27% share of renewable energy consumption by 2030 (European Commission, 2018). RES interest is steadily growing, but their use is associated with many problems.

The use of RES involves higher costs. The sources of this energy are unstable and it is not possible to store the electricity produced. Moreover, these sources are highly dependent on natural conditions (wind strength or degree of sunshine). The increase in the share of RES in the structure of electricity production is associated not only with significant changes in the structure of energy sources, but also with an increase in their production costs. Therefore, the development of renewable energy requires institutional and financial support, at least at the investment stage (Janik, Kaproń, Paździor, 2018).

Since the ancient time supply of energy has relied on the Renewable Energy Sources (RES) like: wind mills or water machines. The potential of renewable energy sources is enormous as they can in principle meet many times the world's energy demand. A transition to renewable-based energy systems is looking increasingly likely as their costs decline while the price of oil and gas continue to fluctuate (Herzog et al., [online]). Nowadays, Renewable Energy Sources are considered by the World Energy Council as the energy of the future. In the literature RES is defined as "energy from sources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time" (US Energy Information Administration, Feb 20, 2020). Renewable energy sources gained global importance in the 1990s, when the focus was on solar and wind energy (Borgosz-Koczwara, Herlender, 2008).

The Energy Law Act defines RES as 'sources which derive energy from the following natural phenomena: wind, solar radiation, geothermal springs, waves, tides, the fall of rivers, biomass, dumping ground biogas, and also biogas produced in the process of cleaning wastewater or decomposition of plant and animal remains'. RES exploitation does not cause its long-term deficit. This means that the resources are renewed in a short time. Their opposite is non-renewable energy sources that are sources, the depletion of which progresses much faster than their natural renewal. The feature distinguishing renewable energy sources from the conventional ones, is the lack of (or a significantly smaller amount of) negative impact on the environment. This is due to the renewal of primary energy (sun, water) and limited emission of waste, dust and gases (Wolanczyk, 2009; Ligus, 2010). Thus, renewable energy is clean energy that comes from natural sources or processes that are constantly replenished.

The term "renewable" is generally applied to those energy resources and technologies whose common characteristic is that they are non-depletable or naturally replenishable. Renewable resources include solar energy, wind, falling water, the heat of the earth (geothermal), plant materials (biomass), waves, ocean currents, temperature differences in the oceans and the energy of the tides (Renewable energy overview [online]).

At present, it is assumed that the potential of renewable energy sources can meet the growing energy demand of the Earth's population. Their use increases every year by about 4-7% and this rate should be maintained until 2020 (World Energy Council Statement, 2000).

Importantly, the uncontested renewable energy sources include: biomass waste - waste from agriculture and industry (including wood) and communities, biogas from landfills, sewage treatment plants and solar energy from distributed systems. RES in conflict with the environment are: wind energy, hydropower and geothermal resources (Kawałczewska, 2006).

The potential of RES is thought to fulfil the increasing energy demands of the Earth population. Yearly their usage grows approximately by 4 -7 % and this rate should continue till 2020 (World Energy Council Statement, 2000).

RES includes hydropower, biomass, geothermal, solar, wind and marine energies (see table 1). The renewable is the primary, domestic and clean or inexhaustible energy resource (Kaushikb, Kotharia, 2011). „There is an evolution in technology and its impact transfer scientific progress to the evolution of management and economy” (Piórkowska, Stańczyk-Hugiet, 2017).

Table 1: Main Renewable Energy Source and Their Usage Form

Energy source	Energy conversion and usage form
Hydropower	Power generation
Modern biomass	Heat and power generation, pyrolysis, gasification, digestion
Geothermal	Urban heating, power generation, hydrothermal, hot dry rock
Solar	Solar home system, solar dryers, solar cookers
Direct solar	Photovoltaic, thermal power generation, water heaters
Wind	Power generation, wind generators, windmills, water pumps
Wave	Numerous designs
Tidal	Barrage, tidal stream

Source: Demirbas A. (2006). Global renewable energy resources. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 28(8), pp. 779–792.

Table 2: Share of Energy from Renewable Sources in Gross Final Consumption of Energy in Poland, Hungary and Greece in Years 2004-2016

Country	Share of renewable energy in gross consumption in years				
	2004	2007	2010	2013	2016
Poland	6.9	6.9	9.3	11.4	11.3
Hungary	4.4	8.6	12.7	16.2	14.2
Greece	6.9	8.2	9.8	15.0	15.2

Source: own elaboration based on date of Eurostat (<https://ec.europa.eu/eurostat>, 19/02/2020).

In the EU, energy consumption is falling over the period 2004-2016, although individual countries are experiencing economic development. The share of renewable energy varied: in 2016 from 6% in the Netherlands and Malta to 54% in Sweden (Poland 11.3%. Hungary 14.2%, Greece 15.2% - see table 2). Both countries with a high share of renewable energy and countries with a low share are the most economically developed countries. Countries with appropriate natural conditions invest in renewable energy. A large share of hydroelectric power is mainly held by countries with many rivers and natural height differences (Austria, Slovenia, Sweden). Wind energy is used in countries with favourable wind conditions, such as Ireland, Great Britain and the Netherlands. Solar energy is the domain of countries with many sunny days per year (Spain, Malta, Cyprus). Biofuel is the most easily accessible source of energy, so it is the dominant renewable energy source in almost all EU countries, also in Poland, Hungary and Greece – see table 3 (Rokicki at all, 2018).

Table 3: Renewable Energy Structure in Total Energy Consumption in 2016 in Poland, Hungary and Greece.

Country	Renewable energy sources				
	Biofuels	Water	Wind energy	Solar energy	Geothermal energy
Poland	84.6	2.1	12.3	0.7	0.3
Hungary	92.4	0.7	5.3	0.0	0.0
Greece	43.4	18.4	17.1	20.8	0.4

Source: own elaboration based on based on (Rokicki at all, 2018) (2020).

2. Problem Formulation and Methodology

Renewable energy sources (RES) are characterized by the fact that their use is not associated with long-term deficits. Their resources are constantly replenished as a result of natural processes that practically make them non-functional. Renewable energy sources are an alternative to fossil fuels, which is why an approach to renewable energy is a priority. The study was aimed at obtaining information on the knowledge of citizens of selected EU countries about renewable energy sources. The study used an anonymous diagnostic survey. 89 respondents took part in the survey. The first part of the survey covers general renewable energy issues. The next part of the study refers to the practical use of renewable energy sources in the respondents' place of residence and the benefits resulting there from. there from.

3. Analysis of Results from the Conducted Study

Renewable energy has an impact on the environment. However, it is far less damaging than traditional energy production. Renewable energy is a counterweight to energy resources (non-renewable sources of energy), elimination of air, water and soil pollution, and counteracting climate change (Kawalczevska. 17/09/2019)

The most eco-friendly form of RES from is the battery-powered by solar radiation and geothermal sources. Another ecological way of involving renewable energy to the processing of what might seem to have anyone unnecessary waste, or use of, e.g. landfill biogas or biomass from animal manure or plant waste. Less popular among citizens is knowledge about obtaining energy from waves and tides. On the other hand, hydropower and wind farms (use of water and wind), are recognized as not polluting like traditional coal, however their construction and operation interferes with the existing ecosystem.

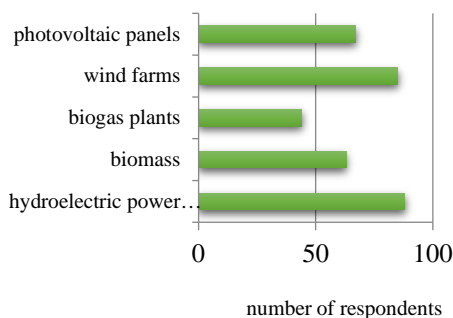
Energy from unconventional sources that use: solar energy, biomass, geothermal energy, kinetic energy stored in wind and water is conducive to environmental protection. Combustion of primary fuels. The combustion of primary fuels has a negative impact on the environment, because during this process significant amounts of carbon oxides, sulfur and nitrogen are released into the atmosphere. Renewable energy sources are also mostly considered by citizens as a tool to reduce greenhouse effects and reduce hazardous gases. Awareness among citizens about so-called of concomitant impurities, such as dust, sulphur dioxide, nitrogen oxides, or contaminants that directly or indirectly affect the health of everyone and is important.

The results of pilot studies conducted by the authors are presented below. Test results were presented at the conference Cest.Gnest Rodos (Rutkowska-Podolowska M. at all, 2017). 89 people participated in the study, including: people from Poland dominate (86.52%). Other people came from Greece and Hungary. The age structure of respondents is as follows: people aged 50 and over constitute 40.4% of respondents, 34.8% are citizens aged 41-50, while the

smallest group are people aged 20-30 (5.7%). The educational structure of respondents is consistent with general population data. However, this is irrelevant because of a small percentage of people with primary education. People with higher education (57, 3%) or secondary constituted the majority of the study group.

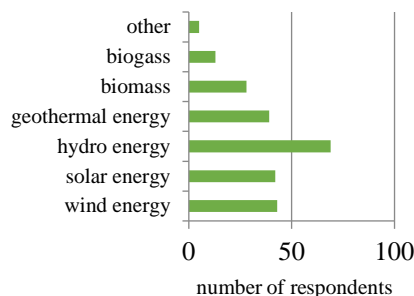
This study found that among the respondents most known sources of renewable energy are hydropower (almost 99% of respondents) and wind farms (over 95%). The least known methods of renewable energy is biogas (less than 50%). In addition, respondents pointed hydroelectric power plants as the best known RES. Water energy was pointed as a source of the greatest number of opportunities in the area of their residence (see figure 1) however; this is only slightly more than 77% of responses. About 50% of the respondents mentioned wind, solar and geothermal energy. Slightly more than 30% indicates biomass and biogas only just under 15% (see figure 2).

Figure 1: Res Known to the Respondent



Source: own elaboration (2019).

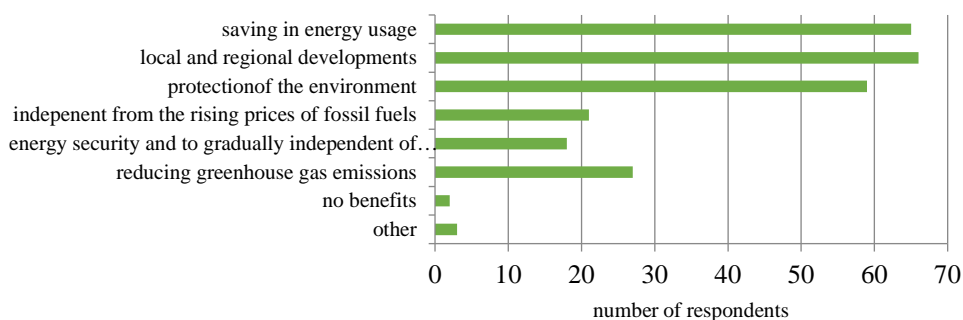
Figure 2: RES which Have a Chance to Develop in the Respondent's Place of Residence



Source: own elaboration (2019).

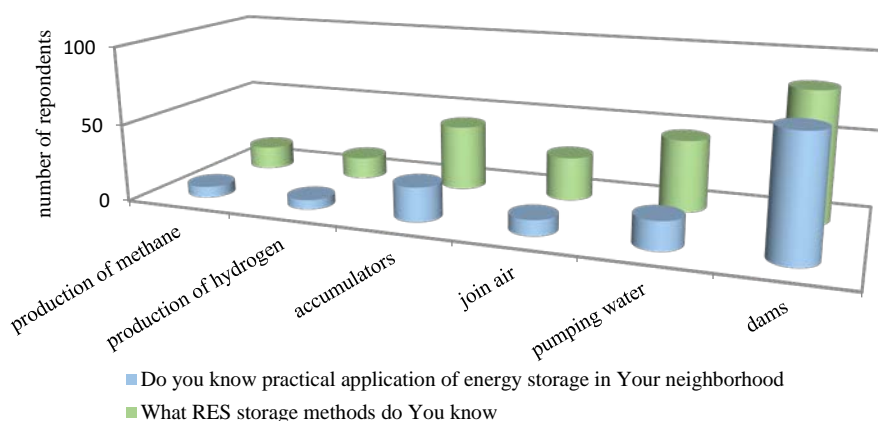
As shown in Figure 3, the vast majority of respondents recognize the benefits of the investments related to the use of renewable energy sources (just over 2% believe that there will be no any benefits). Moreover, the majority of respondents indicated that these investments lead to local and regional development and savings in energy use (74% and 73%). A slightly less pointed was response to "environmental protection" (over 66%). Significantly fewer respondents indicated that such investments are associated with a reduction in greenhouse gas (approx. 30%) and independent from rising energy prices (almost 24%) and energy security (approx. 20%).

As shown in Figure 4 - the vast majority of respondents indicate dams (over 93%) as the energy storage method, as well as the way they are considered to be used in the area (over 85%). In other cases, there is no such convergence between conventional methods and noticeable in the area of residence of the respondents. Respondents' knowledge about energy storage: exchange pumping of water (over 51%) and batteries (over 47%). These methods are also noticed by a much smaller number of respondents (by almost 25% and over 20%) in the area of possible implementation and development.

Figure 3: RES Benefits According to Respondents

Source: own elaboration (2019).

In turn, only a few percent of respondents who actually use this energy source are known to other processes (e.g. hydrogen and methane production). Knowledge of the most of respondents about renewable energy sources is assessed as an average (over 66%).

Figure 4: RES Storage Methods Known to the Respondents and Used in Their Neighbourhood

Source: own elaboration (2019).

4. Conclusion

The presented research results are a preliminary test for future research. On their basis, it was found that renewable energy sources bring many benefits on the one hand to the environment, as well as for the entire economy and society, on the other.

It should be emphasized, however, that in the survey the majority of respondents were Polish citizens and therefore for a clear estimate for other countries the results of this survey were insufficient.

However, they indicated that the share of electricity from renewable energy sources in energy consumption is an indicator of eco-development. Therefore, its impact on the transformation towards a green economy can be calculated (Sulich, Zema, 2018).

Based on the analysis of the conducted study, it was found that hydroelectricity is considered by respondents as an ecological and best-known form of RES. Respondents associate renewable energy with energetic efficiency and regional development. For rural areas, it has been pointed out that renewable energy sources have many benefits for the environment, as well as for the economy as a whole. Respondents indicated that they do not combine investments in renewable energy sources with green employment as a source of development of their region (Rutkowska-Podołowska et al. 2016). The knowledge of the respondents was determined by them at an average level, which is why they pointed to the possible impact of investment in the RES First component.

The above studies were pilot. To sum up, in order to assess the real dimension of the phenomenon, a larger number of respondents should be surveyed. This will allow for a broader and more accurate analysis.

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The Effects of the Application of Alternative Options of Redistributive Payment for Farmers in Poland – Simulation Research

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Abstract

This article discusses research on redistributive payment, which is an element of the direct support scheme for farmers applied under the Common Agricultural Policy. The author presented the scope of decisions which the EU Member States can make about the redistributive payment as well as the essence and consequences of the way this instrument is implemented in Poland. The conducted research (simulations, comparative variant analysis) facilitated the identification and measurement of the effects of alternative options of redistributive payment implementation. The final conclusions concerned the redistributive effects of this instrument and their influence on structural changes in agriculture.

Keywords: *Common Agricultural Policy, direct payments, redistributive payment, simulation research*

JEL Classification: *Q10, Q12, Q18*

1. Introduction

Winiarski (2012, p. 23) lists simulation research among the most important methods of economic policy science. He indicated that when this method is applied, specific economic politician-dependent variables are entered as variants into the model. Next, the results are analysed and individual variants of actions taken by the state are evaluated *ex ante*, i.e. before the instrument is launched and starts affecting the economic reality. Stiglitz (2004, p. 20-21) noted that in order to make a systematised analysis of the dilemmas of economic policy, and to properly assess various possible actions taken by the state, it is necessary not only to recognise the effects of different alternative options of these actions but also to create appropriate assessment criteria for these options, taking the assumed goals into account. As regards agricultural policy and rural development policy, Nurzyńska and Drygas (2018, p. 185) emphasised that conducting continuous analytical and diagnostic work to assess the effectiveness and efficiency of the policy on the one hand, and to identify problems and to simulate various development scenarios on the other, is the basis for developing the right policy and making necessary corrections.

In the opinion of Ciliberti and Frascarelli (2018, p. 16), research of the reform of the direct support system for farmers should involve quantitative analyses aimed at evaluating the redistributive effect of direct payments and the impacts on concentration – attention should be paid to the comparisons of different scenarios characterized by the application of alternative criteria for both internal and external convergence of direct payments, redistributive mechanisms (degressivity, capping) and targeted payments focused on redistributive

objectives. Potori, Kovács and Vásáry (2013, p. 122-123) carried out this kind of ex-ante Common Agricultural Policy reform assessment for Hungary, concluding that from an economic point of view the redistributive payment would have no real benefit over the reduction of direct payments, however from a social point of view (in terms of employment and rural livelihoods) the picture might be more nuanced.

In this article, simulation research was used in the variant analysis of one of the instruments of the Common Agricultural Policy, which is the redistributive payment – an element of the direct support scheme for farmers. Recital 36 of the preamble to Regulation (EU) No. 1307/2013 of the European Parliament and of the Council refers to this instrument as follows: “Taking into account the need for the unitary support to farmers with smaller holdings to be sufficient in order to achieve the objective of income support effectively, Member States should be allowed to redistribute direct support between farmers by granting them an extra payment for the first hectares” (in practice, it is permitted to set the lower area threshold, which means that the aid provided under the redistributive payment does not necessarily have the form of support for “the first hectares”). This statement indicates that the redistributive payment should be used for increasing the level of support provided to small farms above the level resulting from the fact that the amount of aid allocated under the most common income support instrument for farmers in the European Union (i.e. the basic payment in the entitlement-based scheme and single area payment in the simplified scheme) is generally proportional to the area of agricultural land on a farm.

2. Research Methods and the Source Material

This article presents the results of comparative variant analysis, based in particular on simulation studies. Mathematical methods were applied, while the data for 2019 from the Ministry of Agriculture and Rural Development and the Agency for Restructuring and Modernisation of Agriculture (i.e. the Polish paying agency responsible for the payment of direct payments for farmers) served as the source material.

3. Results

This part of the article presents the scope of the Member State's decision-making in relation to the redistributive payment. Then, the implementation variant of this payment in Poland was characterized. Finally, simulation results of the application of sample alternative options are presented and discussed.

3.1 Member State's Scope of Decision-Making

The maximum amount an EU Member State may annually allocate to finance the redistributive payment must not exceed 30% of the national ceiling, i.e. the total amount of funds allocated to this country for a given year to be distributed under the direct support scheme. At the same time the EU regulations say that the redistributive payment rate must not exceed 65% of the average national level of support per hectare provided under the direct payment scheme. This value is calculated as the ratio between the national ceiling for 2019 and the area covered by the single area payment in 2015.

In addition to setting the redistributive payment financing level (within the limit specified in the EU regulations), a Member State decides on the shape of this instrument, indicating the range of hectares in the farm to be covered by the payment. The range must not exceed the

limits set in the EU regulations, i.e. 0 ha (the lower limit) and 30 ha or the average farm area – annex VIII to Regulation (EU) No. 1307/2013 of the European Parliament and of the Council lists average farm sizes in individual Member States – in a given country (the greater of these two values being the upper limit). Additionally, a Member State can grade the payment rate in separate hectare sub-ranges.

As proposed by the European Commission as to the shape of the Common Agricultural Policy after 2020 (these proposals were presented in a draft regulation of the European Parliament and of the Council (COM(2018) 392)), in the next financial perspective the Member States will have even more freedom to adjust this instrument to their individual needs at the national level (according to the new nomenclature, “the complementary redistributive income support for sustainability” will be the counterpart of redistributive payment in the new system). The proposed EU regulations do not specify the upper limit of the area range to which a payment may be granted. Apart from that, there will be no redistributive payment financing limit and there will be fewer restrictions concerning the maximum rate of this payment, as the permissible ratio between the redistributive payment rate and the average national level of support per hectare will increase from 65% to 100%. These changes will increase the potential impact of the redistributive payment in bridging the differences between the amounts of support individual farmers are due to receive.

3.2 Implementation Variant Applied in Poland and its Effects

The top rows of Table 1 show data on the funding level of redistributive payment in Poland in absolute terms (million euros) and relative terms (as part of the national ceiling). Since the introduction of the redistributive payment in 2015 the amounts provided under this instrument were increasing every year until 2019. In relative terms this amount was 8.3% of the national ceiling or slightly above. On average, almost 289 million euros was allocated to the financing of redistributive payment annually, which is almost 8.5% of the average annual national ceiling calculated for this period. The middle part of Table 1 shows the rates of redistributive payment in individual years of the period in question. As shown in the Table 1, so far the rate of this payment has fluctuated within a narrow range of 40-43 euros/ha.

In Poland the average national payment per hectare amounts to 244.05 euros. According to the EU regulations, the redistributive payment rate must not exceed 65% of this average, so it cannot be higher than 158.63 euros/ha in Poland. This limitation would not force a linear reduction of the redistributive payment rate granted on the current terms, even if the financing of this payment was increased to the maximum level allowed by the EU regulations, i.e. up to 30% of the national ceiling. To exceed the level of 65% of the national average payment per hectare it would be necessary to increase the redistributive payment financing level almost four times. However, due to the limit of 30% of the national ceiling this level could be increased about 3.5 times.

The development of solutions for redistributive payment at the national level is restricted not only by the permissible financing level (expressed as a percentage of the national ceiling) and the maximum permissible payment rate (expressed as a percentage of the average national payment per hectare) but also by the upper limit of the hectare range on the farm which may be eligible for support within this instrument. As the average farm area in Poland is less than 30 ha (it is 6 ha), the upper limit is 30 ha.

According to the assumptions adopted in Poland, the support provided within redistributive payment is to be targeted at a group of medium-sized farms. Although they do not benefit from the scale of production as much as the largest farms, they have some potential for development

(Ministry of Agriculture and Rural Development, 2015, p. 11). This is how the covering of the aforementioned hectare range of (3; 30] with the redistributive payment was justified. This means that this support is provided to the agricultural area on a farm to which a single area payment was granted, and which is a surplus of over 3 ha, but does not exceed 27 ha. Thus, the maximum annual amount of support provided to a single farm as part of redistributive payment in a given year is the product of 27 ha and a payment rate for that year. The last row of Table 1 shows these amounts in individual years. They were paid to all farms where the agricultural area covered by the single area payment was at least 30 ha.

Poland is the only country out of 8 Member States (Bulgaria, Croatia, France, Lithuania, Germany, Poland, Portugal, Romania) and 2 regions (Wales and Wallonia) which applies the lower threshold at an amount that is different than 0 ha (European Commission, 2016, p. 4). This can be treated as a special case of rate gradation, with a zero rate for the hectare range of (0; 3].

When a specific amount is allocated to finance the redistributive payment, the level of funding of single area payment is automatically reduced by this amount. Therefore, the redistributive payment is advantageous only for some farmers (as each beneficiary of the redistributive payment is also a beneficiary of the single area payment). Table 2 shows the baseline data (for 2019) and calculations which resulted in setting farm size limits for redistributive effect purposes (simultaneously, these are the area ranges of farms recording loss/profit on the redistributive payment). As demonstrated in the Table 2, the farms whose area is smaller than 5.9 ha and those larger than 54.8 ha incurred loss on the introduction of the redistributive payment in its current form. They would have received more support without the redistributive payment because the funds allocated to the scheme would have otherwise been distributed under the single area payment scheme. In turn, the farms which are larger than 5.9 ha but smaller than 54.8 ha would benefit from the redistributive payment in its current form. The application of redistributive payment is neutral for the farms with border areas, as the amounts they received were not affected by this instrument. Thus, the range of farm areas benefiting from the redistributive payment (5.9 ha; 54.8 ha) is wider than the range of hectares on the farm to which the redistributive payment is currently granted (3 ha; 30 ha], and it is shifted to the right.

In other words, the farms benefitting from the redistributive payment are the ones where the total amount of support provided under the single area payment and the redistributive payment, divided by the agricultural area, is higher than the single area payment rate that would apply if the redistributive payment had not been introduced. This dependency is illustrated in Figure 1. As can be seen, for the farms that are larger than 5.9 ha but smaller than 54.8 ha the red line, which marks the variant applied in 2019, runs above the dashed horizontal line, which marks the alternative option without the redistributive payment.

In the applied variant, as regards farms that are not larger than 3 ha, the average amount of support provided per hectare of land is fixed, and it is equal to the single area payment rate (this situation is illustrated by the initial horizontal section of the red line in Figure 1). When a farm exceeds the lower limit of the range of hectares covered by the redistributive payment, the average amount of support provided per hectare of land increases until it reaches the upper limit of this range, i.e. 30 ha (the red line in Figure 1 reaches its peak value at this farm size). As the farm size further increases, the average amount of support provided per hectare of land decreases, and asymptotically approaches the horizontal line drawn at the level of the single area payment rate, i.e. 107.72 euros/ha). It continues declining until it reaches 1,392.5 ha (in consequence of applying a 100% reduction ratio in Poland, the amount an individual farm may receive as a single area payment must not be greater than 150 000 euros; thus, the farm's size

threshold, the exceeding of which means coverage by the payment reduction mechanism, can be calculated as the quotient of 150 000 euros and the single area payment rate – 107.72 euros/ha). Then the effects of the payment reduction mechanism (established under Article 11 of Regulation (EU) No. 1307/2013 of the European Parliament and of the Council) can be observed. Therefore, since that point the decline dynamics of the average support amount provided per hectare of land is greater.

In contrast, in the variant without the redistributive payment, the amount corresponding to the sum of the amounts allocated in the applied variant to finance the single area payment and the redistributive payment would be distributed only within the single area payment. For all farms that are not larger than 1,167 ha (this farm size limit was calculated in the same way as in the variant discussed above, i.e. the amount of 150 000 euros was divided by the single area payment rate; however, as the single area payment rate is higher in this variant (128.54 euros/ha), the division resulted in a smaller farm size limit), the average amount of support provided per hectare of land (under the single area payment and redistributive payment) would be equal to the single area payment rate (horizontal dashed line in Figure 1) due to the absence of the redistributive payment. The farms which exceed this area threshold would be covered by the payment reduction mechanism. In consequence, since that point the average support amount provided per hectare would decrease as the size of the farm would increase.

3.3 The Effects of Example Alternative Options

This part of the article measures the effects of the following changes in the funding level or the shape of redistributive payment at the national level (while maintaining the other currently applicable solutions related to this instrument):

- a. Variant I – increasing the funding level of the redistributive payment to the maximum level permitted by the EU regulations (i.e. up to 30% of the national ceiling);
- b. Variant II – maximum extension of the hectare range covered by the redistributive payment (i.e. support will be provided to no more than 30 “first hectares” on the farm);
- c. Variant III – maximum extension of the range of hectares covered by the redistributive payment and progressive gradation of the redistributive payment rate, i.e. the rate of this payment provided to hectares within a range of (3; 30] will be twice as high as the rate provided to hectares within a range of (0; 3].

In variant I the pool of funds allocated to the redistributive payment is increased at the expense of the single area payment. Thus, the change in the redistributive payment financing level causes the same change in the single area payment financing level in terms of the absolute value, but with the opposite direction. In this option, the rules of granting redistributive payment are the same as the current ones, i.e. the support provided under this instrument is allocated to a hectare range of (3; 30], whereas the payment rate remains constant within the entire hectare range to which aid is provided.

In variant II the rules of granting redistributive payment will change, but the financing amount under this instrument (a little over 298 million euros) will be maintained. No change in the funding level of redistributive payment in absolute terms means no change (as compared with the current solution) in the amounts of the single area payment granted to individual farms. In comparison with the current solution, the change in the rules of granting the redistributive payment consists in including a hectare range of (0; 3]. After this modification the hectare range supported with the redistributive payment will be (0; 30]. Taking into consideration the

EU regulations concerning the redistributive payment, this is the widest hectare range that could be applied in Poland.

Variant III is also characterised by a change in the rules of granting the redistributive payment while maintaining the current amount of funds for this instrument. In comparison to variant II, the change in the rules of granting the redistributive payment consists in the gradual differentiation of the payment rate within the current range rather than in the extension of the range of hectares that will be covered by the support. Two hectare subranges were identified for this purpose: (0; 3] and (3; 30]. The amount of support allocated for the redistributive payment was divided between the hectares included in individual subranges so that the payment rate in the second subrange was twice as high as in the first.

In practice, there is an infinite number of possible alternative options, including combinations of the implementation options presented above. This article presents the results of simulations in which alternative solutions regarding the redistributive payment were applied to a population of farms with a specific structure (beneficiaries of direct payments for 2019). However, we should bear in mind that the mere announcement of modification of these solutions may cause some farms to make adjustments, which to some extent will affect the distribution of support between beneficiaries.

Figure 2 presents the results of a simulation showing the average amount of support per unit of agricultural area provided to a farm (as part of the single area payment and redistributive payment) depending on the size of the farm and the redistributive payment variant implemented.

As demonstrated in Figure 2, in relation to the current solution:

- a. variant I improves the financial situation of farms with an area larger than 5.9 ha, but smaller than 54.8 ha at the expense of all other farms;
- b. variants II and III improve the financial situation of farms with an area up to 11.1 ha at the expense of all other farms.

In addition, as Figure 2 shows, the range of changes in the values of the function under analysis is the largest in variant I, whereas it is the smallest in variant II. This means that variant I is characterised by the largest differentiation in the average level of support per hectare between farms, whereas the smallest differentiation can be observed in variant II. Additionally, the data show that in the currently applicable variant and in the alternative options farms with an area equal to the upper limit of the hectare range covered by the redistributive payment would receive the highest average amount of support per hectare (the graph of this function reaches its peak value for $x = 30$). In variant II farms with an area not larger than the upper limit of this range would receive the highest average amount of support per hectare. For other farms, the average amount of support per hectare would be lower and would decrease as the farm area increases.

4. Conclusion

The regulations established by the European Union give the Member States a lot of freedom to design their redistributive payment schemes individually. Thus, they can adjust this instrument according to the local conditions and national priorities.

If a goal is to considerably reduce the concentration of aid distributed under the direct support scheme (i.e. to prevent the absorption of a relatively large part of the funds by a relatively small group of farms), a principle would have to be introduced under which the support under

the redistributive payment would be granted for “the first hectares”. Decision-makers should also ensure the highest possible level of funding this instrument.

On the other hand, the redistributive payment can be designed in such a way so as to stimulate positive structural changes in agriculture. If the redistributive payment was to stimulate the increase of the average farm size, especially by enlargement and a simultaneous decrease in the number of the smallest farms, the effect could be produced by providing no payment to a certain range of “first hectares”. This way stronger support could be provided to farms of the preferred size. High amounts allocated to the redistributive payment would result in a relatively large disproportion in the average amount of support per hectare between the farms whose area is smaller than the lower limit of the range covered by the redistributive payment, and the farms of the preferred size. In consequence, the ability of the smallest farms to compete on the market would be relatively reduced. Simultaneously, there would be stronger incentives to merge small farms, because of the possibility of receiving higher amounts of aid per hectare of land.

The redistributive effects of the instrument analysed in this paper determine the direction and strength of its influence on structural changes. A more egalitarian division of funds under the direct support scheme may be justified by the implementation of social objectives and by striving towards a fairer distribution of funds. Alternatively, as regards the group of small and medium-sized beneficiaries a redistributive payment can ensure a progressive increase in the amounts of support proportionally to the farm area, excluding the smallest farmers from the group of beneficiaries of this instrument. Such a solution may foster structural changes in agriculture towards creating a sector which is in a greater extent integrated with the environment and able to function permanently on the market.

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*Appendix***Table 1: The redistributive payment in Poland between 2015 and 2019 – the financing level, rate and maximum amount of support per farm**

Year		2015	2016	2017	2018	2019
Financing level	<i>million euros</i>	280.42	281.81	289.80	293.93	298.04
	<i>% of national ceiling</i>	8.30	8.30	8.49	8.57	8.64
Rate	<i>euros/ha</i>	40.07	40.01	41.13	41.62	42.25
Maximum unit amount of support per farm	<i>euros/farm</i>	1 081.89	1 080.27	1 110.51	1 123.74	1140.75

Source: author's original compilation based on data from the Ministry of Agriculture and Rural Development

Table 2: The area range of farms benefiting from the redistributive payment in Poland in 2019

Variant	Single area payment		Redistributive payment		Area of farm (x)	Amount provided under		
	Financing level	Rate	Financing level	Rate		single area payment	redistributive payment	Farm-size limits for redistributive effect purposes
	% of national ceiling	euros/ha	% of national ceiling	euros/ha	ha	euros/farm	ha	
applied in 2019	44.70	107.72	8.64	42.25	$x \leq 3$	$x \times 107.72$	0	$x_1 \times 107.72 + (x_1 - 3) \times 42.25 = x_1 \times 128.54$
					$3 < x \leq 30$		$(x-3) \times 42.25$	$x_1 \approx 5.9$ $x_2 \times 107.72 + 27 \times 42.25 = x_2 \times 128.54$
					$x > 30$		27×42.25	$x_2 \approx 54.8$
without redistributive payment	53.34	128.54	0	0	any	$x \times 128.54$	0	-

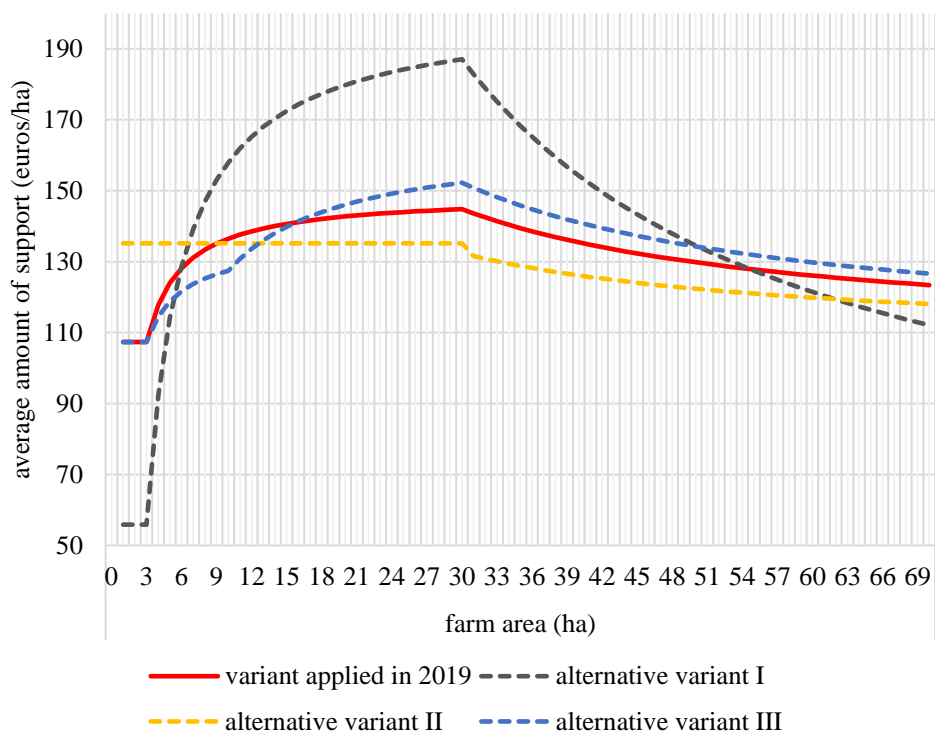
Source: author's elaboration based on data from the Agency for Restructuring and Modernisation of Agriculture

Figure 1: The average amount of support per hectare under the single area payment and redistributive payment (the variant applied in 2019) or only under the single area payment (the variant without the redistributive payment) depending on the size of the farm



Source: author's elaboration based on data from the Agency for Restructuring and Modernisation of Agriculture

Figure 2: The average amount of support per hectare under the single area payment and redistributive payment depending on the size of the farm in different redistributive payment implementation variants



Source: author's elaboration based on data from the Agency for Restructuring and Modernisation of Agriculture

Another Reform of Comitology Procedures – When “No Opinion” Result Leads to (Un)desirable Decision

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Abstract

In 2017 the European Commission published a new legislative proposal to review the so-called comitology procedure through which the Commission exercises the implementing powers conferred on it by the EU legislator with the assistance of committees composed of the nominated representatives from Member States. The Commission draws attention to the fact that in certain areas the comitology committees cannot reach a qualified majority very often, and therefore they conclude with ‘no opinion’. In spite of such result Commission is forced to act. This paper aims to take a look at the possibilities the Commission has and to find the best way to solve this situation.

Keywords: Comitology Procedures, European Commission, Information Acquisition, Regulation

JEL Classification: D 820, D 830, F 15, K 20

1. Introduction

On the St Valentine’s Day in 2017 European Commission published a new legislative proposal to revise the so-called Comitology Regulation (European Commission, 2017). Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 is referred to as the Comitology Regulation. This Regulation lays down the rules and general principles concerning mechanisms for control by Member States of the Commission’s exercise of implementing powers (hereinafter Comitology Regulation). As the heading of the Regulation indicates it lays down the rules and general principles governing the mechanisms which are applied if the basic act (legally binding EU act, mostly regulations or directives) identifies the need for uniform conditions of implementation. And if such basic act requires that the adoption of implementing acts by the Commission be subject to the control of the Member States as stated in Article 1 of this Regulation. The Commission is usually assisted by a Comitology Committee composed of representatives of the Member States. The committee is chaired by a representative of the Commission and the chair shall not take part in the committee vote (Article 3). Each Comitology Committee must adopt its own Rules of Procedure based on the proposal of its chair. Standard Rules of Procedure for Committees were published in the Official Journal after the consultation with Member States. Each committee therefore decides about its operating rules of procedure based on these standard rules. The basic act also provides, while taking into account the nature or the impact of the implementing act, the examination or advisory procedure which should be used for the application (Savin, 2016).

According to the most often used procedure which is examination procedure, it is the Commission which puts forward proposals of legislative acts to the committee composed of representatives of Member States. Such committee adopts an attitude based on qualified majority voting settled down in the Treaties (primary law). There are three possible scenarios which can occur during the vote: firstly, if the qualified majority of Member States representatives votes in favour of adopting the implementing act proposal (affirmative opinion), the Commission is obliged to adopt the implementing act concerned. Secondly, if the qualified majority of Member States representatives votes against the implementing act proposal (negative opinion), the Commission is not allowed to adopt the implementing act concerned. Thirdly, if the qualified majority was not reached neither in favour nor against the implementing act proposal (which means the vote ends up with “no opinion” result), the Commission may adopt the implementing act concerned. It means the Commission can also decide not to adopt such an implementing act.

The possibility to adopt implementing acts in case of no opinion is steered by an effort to ensure effective implementation of regulations. Only disapproval represented by a qualified majority of Member States can block the adoption of an implementing act made by the Commission. However, according to the Article 5 paragraph 4 second subparagraph of the Comitology Regulation, exceptions are defined for situations when the Committee’s voting ends by no opinion result and therefore the Commission is not allowed to adopt the implementing act. This relates to the three following cases only: firstly, an implementing act shall not be adopted in some factually specified areas (such as security or protection of human and animal health); secondly, if the basic act prescribes it, and thirdly, if a simple majority of committee member disagrees with the proposal. Only in these cases and when an adoption of an implementing act is considered necessary, the Commission can lay a proposal before the Appeal Committee for further examination. The Appeal Committee is also composed of Member States representatives but on a higher level. If the Appeal Committee session again ends by „no opinion“ result, the Commission is allowed to decide to adopt the proposal or not.

Therefore, to eliminate this undesirable situation, the Commission proposed another reform of the Comitology Regulation.

2. Key Elements of the Commission Proposal

The European Commission argues that such flexibility does not rid the Commission of the obligation to decide in cases related to market access requests for certain products or substances. With regard to the right of a producer to receive a decision based on their application, the Commission is obliged to adopt the corresponding decision in due time. Having a brief look into the statistics, from a total amount of 1726 opinions issued in 2015 only 2 opinions were negative and in 36 cases there were no opinion results (European Commission, 2017, p. 5). It represents approximately 2 % from the total amount. The Appeal Committee did not issue any opinion in 10 cases from 36 submitted. From 2011 to 2015 the Appeal Committee confirmed a „no opinion“ in 36 cases from 40 submitted ones. Therefore the European Commission declared that Appeal Committee did not help to demonstrate the Member States clear position so it has very low added value (European Commission, 2017, p. 5). Because of this the Commission believes that the rules related to adoption of Appeal Committee opinions have to be changed.

To support its position the Commission in spite of a very low number of cases states that such situation is related to very sensitive areas concerning health and security of people, animal and plants, for example in the field of genetically modified organisms (GMO). Despite the

Commission is allowed to decide, it believes that Member States should assume more responsibility in certain cases and play a more active role in the decision-making process.

From that reason the Commission aims to reduce the risk that Appeal Committee does not adopt any opinion and at the same time to ensure assuming responsibility by Member States and their engagement in politically sensitive decisions. Therefore, the Commission has announced four parallel proposed amendments to the Comitology Regulation:

(a) Changes to the voting rules for the Appeal Committee

Committees, including the Appeal Committee, deliver in the examination procedure their opinion by qualified majority as defined in the Treaties. In accordance with current rules abstaining Member States or those Member States which are not presented or represented are not taken into account for the purpose of reaching the qualified majority and are not taken into account when attaining a qualified majority in favour or against, but they are not deducted from the overall figures on the basis of which the 55 % of the Member States and the 65 % of the population of the Union are counted. This means in practice that abstentions expressed during votes and absences of Member States that decide not to be present or to be represented lead to a higher likelihood of no opinion outcomes. The Commission believes that current rules do not move Member States to vote in favour/against the proposed implementing act and therefore do not allow Appeal Committee to play its part in the legislative process. That is why the Commission in its proposal suggests to adjust the voting rules for the Appeal Committee in the following way: Member States which are not present, or which abstain, are 'non-participating Member States' for the calculation of the qualified majority as defined in Article 238(3) (a) of the Treaty of the Functioning of the European Union (hereinafter TFEU). This means that the double majority (55% of Member States representing 65% of EU's population) will be calculated based only on Member States taking part in the vote. At the same time a quorum is set up: a vote shall be considered to be valid only if a simple majority of the Member States is participating in the vote in the Appeal Committee.

(b) Submission of the referral to the Appeal Committee at ministerial level

In order to strengthen the role of the Appeal Committee in particularly sensitive cases the Commission suggests in its proposal to provide for the possibility of a further referral to the Appeal Committee where no opinion is delivered. In such a case at the next meeting of the Appeal Committee Member States should be represented at the ministerial level with the only goal – to allow addressing the problematic issues again at the appropriate political level. The timeframe for the Appeal Committee to deliver an opinion is suggested to be extended by one month to a total of three months from the initial referral.

(c) Make individual Member State representatives' votes at Appeal Committee level public

The Commission believes that more transparency is needed in relation to the positions that Member State representatives take in the Appeal Committee. Therefore, the Commission has proposed to make individual Member State representatives' votes public. The Commission also believes that such measure will increase clarity on the position of Member States.

(d) Foresee the right to refer the matter to the Council for an opinion

In accordance with the proposal the Commission should be enabled to formally refer specific cases after a „no opinion“ outcome in the Appeal Committee for a non-binding opinion to the Council, with a view to obtaining its political orientation on the implications of the no opinion outcome, including the institutional, legal, political and international implications. The Commission should take account of any position expressed by the Council within 3 months after the referral.

3. Examination within the Council and within the European Parliament

Despite that Commission's proposal seems to be closely oriented to a very little amount of cases, its potential to influence future changes of comitology procedure in a very sensitive area of decision-making is not marginal. At the same time motivation of both Union co-legislators to use the opportunity to change existing order differs – the Council wants to keep current status quo and the Parliament tends to increase its influence on approving Union's tertiary legislation.

3.1. Examination within the Council

During the examination of the proposal within the Council bodies, according to the Progress Report prepared by the Bulgarian Presidency (Council, 2018b), the general scepticism related to targets expressed by the Commission proposal was presented, especially in relation to the appropriateness and the necessity of the proposal such as decreasing of the number of “no opinion” result in Appeal Committee voting. As Progress Report presented by the Bulgarian Presidency concludes, none of the four proposal's elements was supported by Member States.

It seems that Member States do not want to amend the existing Comitology Regulation. Member States as well as even the Commission in its explanatory memorandum to the proposal stated that the Comitology Regulation „*allowed the effective use of the Commission's implementing powers under the control of Member States. The present proposal therefore does not aim at changing the comitology framework as such* (European Commission, 2017, p. 3).”

In this context, the proposal raised by the Commission refers to a very limited number of cases, despite in sensitive area. Just to make the picture more clear, from the total amount of approximately 2000 acts adopted by the comitology committees annually, only 2 % of them (it means approximately 20 acts only) are submitted to the Appeal Committee and only one third of them is highly sensitive. To be more precise - in 2018, the comitology committees provided opinions on 1 633 draft implementing acts. There was no negative opinion and there were 32 so-called ‘no opinion’ cases in 2018 as referred Vice-President of the European Commission Maroš Šefčovič during the hearing in the European Parliament on 15 January 2020 (European Parliament, 2020a, p. 206). In other cases Commission exercises its competence and takes decisions. Therefore, it is the Commission who has the full political responsibility for adopting implementing measures if such competence was delegated to it by the basic legislative act. According to the Article 291 (2) TFEU, the legislator (is means the Council and the European Parliament together) has always the right to decide if the competence to implement legally binding Union act should be delivered to the Commission or, in special and properly justified cases, to the Council. And what is the most important in this case, no obligation to vote was prescribed to Member States. Consequently, Council Legal Service stated in its partially published opinion in point 50, first bullet point, that any effort of the Commission to involve Council “...*would go beyond the role for the Council envisaged by the Treaties and would be in breach of the principle of institutional balance, according to which the EU's institutions must act within the limits of their respective competences as set down in the Treaties (Article 13(2) TEU)*”(Council, 2018a, point 50). In the following bullet point of the same point 50 Council Legal Service stated that “*defining the level of representation of the Member States in the appeal committee and entitling the Commission, in Regulation (EU) No 182/2011, to determine this level unnecessarily encroaches upon the national political structures of the Member States protected by Article 4(2) TEU and goes against the principle of sincere cooperation enshrined in Article 4(3) TEU* (Council, 2018a, point 50).”

Within the frame of the Comitology Regulation the Commission can act freely unless in specific cases the Comitology Regulation prescribes precisely what steps should be taken by the Commission in a “no opinion” situation.

As regards the intention to make individual Member State representatives' votes at the Appeal Committee public, according to the Progress Report, many Member States support any way to increase the transparency in relation to share information about Member States voting, despite they “*expressed readiness to explore alternative ways to the Commission amendment of achieving this, such as by amending the Rules of procedure for the Appeal Committee*”(Council, 2018b). Therefore, a new non-binding criteria for the application of Articles 290 and 291 of the Treaty on the Functioning of the European Union were agreed on the ground of Interinstitutional Agreement in June 2019 in which most of the principals elaborated above were included (Interinstitutional Agreement, 2019).

In other words, currently the Council of the European Union is not ready to support the Commission intention to amend the Comitology Regulation. Several scholars, such as Weimer or Pollack and Shaffer point out to limits of deliberations and the danger of politization in sensitive areas like GMOs as well as Burns and Tobin conclude with similar conclusions in relation to the currently top sensitive climate change policy (Weimer, 2014 and 2015; Pollack and Shaffer, 2009; Burns and Tobin, 2020). In current circumstances it is hardly imaginable how national experts will follow their sphere of expertise if scientific and political reasons would differ one from the other and experts would be forced to vote because of the pressure of their state administration, not because of the scientific findings. The room for speculations would be open even more – as Weimer pointed out in GMO cultivation and the role of EFSA (Weimer, 2015, p. 629-630). At the same time, if the implementing act proposal is submitted to the Appeal Committee because of no opinion voting result within the corresponding comitology committee, it is hardly imaginable that any minister – as a political figure with political responsibility towards their voters – would be ready to support or revoke their previous expert's vote if the professional or general public opinion in their home country is rather negative toward the possible proposal concerned. More clarity in the Commission proposal is also needed when the Appeal Committee at ministerial level should take decision as Commission in its initial proposal did not present any justification in this sense. On the contrary, it is rather possible to predict that an approach presented in the Commission proposal would increase the number of situations when Member States representatives abstain in voting or even do not present themselves at the voting.

3.2. Examination within the European Parliament

At the end of January 2020 the draft report by rapporteur József Szájer was published on the official European Parliament web site (European Parliament, 2020b). It has happened only two weeks after the hearing of Vice-President Maroš Šefčovič at the European Parliament plenary session where the Vice-President expressed the Commission's regret that examination within the Council bodies is blocked and almost no progress has been reached within the European Parliament (European Parliament, 2020a, p. 207). During the debate, the rapporteur stated that Parliament's committees „*underline the importance of keeping the comitology framework as it stands, since it's working properly, but they also agree that the transparency aspect should be further enhanced*” (European Parliament, 2020a, p. 206). During the debate a brief comparison to the different situation as regards the delegated acts was also mentioned and, not surprisingly, the Members of the European Parliament who took the floor during the debate expressed their hope that the Commission will continue in its work to advance this proposal within the Council bodies (European Parliament, 2020a, p. 206-210).

Correlatively, in its draft report the rapporteur József Szájer introduced several amendments into the initial Commission proposal – the main idea is expressed in his amendment to the second recital. At the end of the recital he proposes to add that “*(t)he further objective underlying the amendments is to improve citizens' awareness of procedures related to implementing acts. In order to increase trust in the Union's institutions, it is essential not only to inform citizens about taking decisions but also to explain the reasons behind those decisions*” (European Parliament, 2020b, p. 6) and in several other recitals and articles demands so that “*(t)he position expressed by the Council should also be sent to the European Parliament without undue delay*” (European Parliament, 2020b, pp. 7 and 9). In his explanatory statement he urges that “*(e)nvironmental protection but also other fundamental issues such as health and food safety are crucial areas where Member States should show political accountability and must act transparently so that citizens are aware of not only their decisions but also of the reasons lying behind*” (European Parliament, 2020b, p. 11) and “*wishes to express his confidence that, in this spirit, the Commission will be able to promote some progress in the Council regarding the draft proposal*” (European Parliament, 2020b, p. 12).

It should be mentioned here that in principle above cited amendments are not new. As scholars highlight in last decades, European Parliament always calls for a proper parliamentary scrutiny over the executive at the Union level in order to ensure the legitimacy of the Union and to make the Union's decision-making system accountable to citizens. Its approach arises from the constantly presented European Parliament's positions and prefers delegation under Article 290 of the TFEU over the Article 291, whereas Council and Member States favour implementation (Weiß, 2019, p. 348; Brandsma, G. J. and Blom-Hansen, J., 2017, pp. 5-7; Christiansen, T. and Dobbels, M., 2012).

To sum up, the European Parliament according to the mentioned hearing conclusions and the presented Draft Report is likely to support the Commission proposal to amend the Comitology Regulation.

4. Conclusion

The last Vice-President Šefčovič hearing in the mid-January 2020 European Parliament plenary session clearly showed where the Commission actually stands with its last Comitology Regulation review proposal within the two Union co-legislators. It is easy to understand that a compromise between the Council and the European Parliament in relation to this file would not be so easy to find. The European Parliament tends to enlarge its competences stressing its interest to avoid democratic deficit, however, several amendments could be interpreted as overlapping the frame of the original Commission proposal, e.g. the European Parliament amendment No. 13 according to which Member States should “*... not only to inform Union citizens about decision-making but also to explain the reasons behind those decisions, as well as the decision-making process that leads to the decisions*” (European Parliament, 2020c, p. 4). It is possible to predict that such claim would be refused by Member States as not proportional and weighted against Member States.

On the contrary, Member States and the Council as body representing their interests do not wish to discuss the mentioned Commission's proposal stating that the currently valid Comitology Regulation works well and allows the Commission to use its implementing powers effectively so that no change of the comitology framework as such or its basic principles is needed. Yet, the Commission's proposal to make the individual Member State representatives' votes at the Appeal Committee public can be perceived as controversial. The danger that the number of situation when Member States representatives abstain in voting or even do not

present themselves at the voting would increase. In combination with the European Parliament's demand to oblige Member States to justify reasons leading to the decision it could be perceived as a fatal cocktail to Member States and/or the Council to weaken their exercise of implementing powers and contrarily strengthen the influence of the two more homogeneously working institutions: European Parliament and the European Commission.

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Expectations and Results of Harmonization of Ukrainian and the EU Standards

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Abstract

The article is devoted to a comparison of expectations from the process of harmonization of Ukrainian standards with the EU standards with the results achieved. The main goal of harmonization is to remove the trade barriers, increase the level of competitiveness of enterprises and their products, support investment environment. We determined the expected and real level of harmonization of Ukrainian standards with the EU standards and analysed the reasons for the current situation. Among the main problems of standards harmonization are the following: institutional, legal, methodological, technical and financial. The study was conducted in 2017-2019. The following methods were used to achieve the objective of the article: induction, deduction, comparative and logical analysis, as well as content analysis of resources. The results of standards harmonization were determined: approximation of domestic production quality to international requirements, ensuring the modernization of their production, facilitating their access to the international markets.

Keywords: competitiveness of enterprises, standards harmonization, trade barriers

JEL Classification: F20, F60, I10, M30

1. Introduction

The transition from one level of commodity-market relations to another has always taken place against the background of significant socio-political shifts and was an integral consequence of them. In addition, the development of new (that is, progressive concerning previous state) principles of economic activity has never been easy, facing the need to combat all kinds of resistance of the old system. In the conditions of the globalized world and information technologies, this struggle (between the new (progressive) and the old (conservative) not only has not subsided, but has on the contrary grown to a global scale, received modern tools of information influence and acquired more complex (often hybrid) forms. Ukraine is no exception. The transitional processes that have begun in our socio-political system since independence in 1991 continue to determine the state of our economy and the directions of its development. However, these processes in Ukraine have their specifics. In addition to the factors mentioned above, the result of the struggle between the old and the new systems is also

significantly influenced by the geographical position of our country. Its localization and direct border with powerful EU markets, on the one hand, and Russia, on the other, have intensified the opposition of supporters of the two systems both domestically and abroad. It is clear that all of the above creates certain changes (reform) expectations and influences the real results of these changes (reforms).

The authors of the proposed article are active supporters of Ukraine's European integration, so the research and its representation reflects the analysis of the expectations and results achieved from the point of view of this part of society.

2. Problem Formulation and Methodology

A brief description of the circumstances surrounding the study of this article's authors – the process of harmonization of Ukraine's standards with EU standards – explains to some extent why these processes (hereinafter PHUS – Processes of Harmonization of Ukrainian Standards) are still incomplete and have to overcome all new obstacles. A more detailed analysis showed the complexity of the problems that need to be synchronized with the PHUS in order to be successful. Among the most important of this set of problems we highlight the following:

- insufficient focus on market-state interaction;
- barriers to transition from the industrial stage of society to the information and digital economy;
- inconsistency of business models of enterprises to European integration and implementation of international standards of their activity;
- weak relationship between the production of goods and services and the integrated management system at all levels.

2.1 The Purpose of the Article

The purpose of the article was to present the results of the study of the dynamics of harmonization process of Ukrainian standards with EU standards, stimulating and inhibiting factors, as well as the reasons for deviations between expected and obtained results.

2.2 The Methodology of the Study

To achieve the goal, we developed a research methodology, which was conducted in October 2017 and February 2020 and consisted of two steps. In the first stage, they analysed secondary information using the following methods: cabinet analysis, grouping, induction and deduction, logical and comparative analysis, content analysis. The sources of information in the first stage were the laws of Ukraine, relevant to the subject of research, sectoral reports of technical committees on PHUS, as well as the most up-to-date publications of monographs and scientific articles of Ukrainian and foreign scientists who studied the processes of European integration. In the second stage we considered to supplement and deepen the results obtained through the collection, systematization and analysis of primary information. The in-depth expert interview method was selected as the most appropriate one to obtain relevant, valid and reliable information based on a pre-developed scenario. The units of survey were the answers of the heads of small and medium-sized enterprises, comparable in scale, activity, localization and specialization. They all represented the service sector in the services market (transportation, express delivery, parking, etc.). Sampling method was a targeted combined quota selection. Volume – 84 respondents: 7 heads of small, medium and large enterprises from the Center (North), West, East and South of Ukraine. Coding was used to systemize the data, and processing of the resulting array of information was performed using Statistics software.

3. Problem Solution

The processes of European integration of Ukraine in general and the implementation of international standards in Ukrainian practice in particular have been and remain the subject of research by reputable scholars. Researchers have studied the theoretical and practical problems of the emergence and development of integration processes in Europe (Yakovyuk, 2012). Much attention was paid to the mechanisms of formation and implementation of the state policy of Ukraine in the field of European integration (Palahniuk, 2014; Simarmata and Keke, 2017; Hemenyuk and Knysh, 2019).

Important areas of research were, in particular, the analysis of the dynamics of Ukraine's citizens attitude to the EU and the study of the specific processes of European self-identification of Ukraine's population. Analysts emphasized the complexity, gradual and multifaceted nature of these processes, as well as the fact that they (processes) affect the most important spheres of human life: political, economic, social and cultural. Despite all the difficulties, the results of the studies indicate a positive change in citizens' attitudes towards the European vector of development (Yakymenko and Pashkov, 2018). A significant role in improving these sentiments has been played by civil society institutions, which have already passed certain stages of their development and improved the nature of their relations with the state. However, information and advisory, dialogue and partnership tools of interaction still need to be improved at the stage of implementation of Ukraine's integration strategy with the European Union (Kostenko, 2018; Melecký and Staníčková, 2018; Onyshchuk et al., 2019).

Scientific publications emphasize that International and European standards are by far the most versatile regulatory system that meets the interests and demands of quality of goods and services provided by representatives of different countries. Hence, the harmonization of Ukrainian standards with EU standards provides the opportunity to consistently eliminate the shortcomings and inconsistencies of the Ukrainian standardization system without compromising the integrity of this system (Sereda, 2015; Harris, Sithole and Kibirige, 2017; Zhaldak, Shulgina and Mynarzová, 2018; State Fiscal Service of Ukraine [online], 2019).

In 2014-2019, the legislation harmonization was paid significant attention as it supposed to result in reduction in the number of business inspections, the cancellation of licensing and certification of most activities. This was due to the fact that the Free Trade Area envisages not only the refusal of duties and the removal of technical barriers, but also mutual access to the service markets, the possibility of opening branches, creating joint projects, etc. (Council of the European Union [online], 2017). Thus, much efforts have been made by scientists, government bodies, entrepreneurs and the public of Ukraine to study the history, causes and consequences of European integration, harmonize the terminology of standards, formulate an appropriate legislative field for standards harmonizing, and clarify and popularize the need for these activities.

However, to determine market participants' valuation judgments about the processes under study (i.e. actually those entrepreneurs who have to put into practice harmonized standards), it was necessary to gather primary information on the peculiarities of their perception of the process of harmonization of Ukrainian standards (PHUS). In addition, in the second stage of the survey was considered expedient to identify possible differences between the respondents' evaluations due to the location and size of the enterprise. All questions were grouped into blocks pertaining to their perception of the following aspects: 1) the goals of harmonization of standards at Ukrainian enterprises; 2) the influence of PHUS on the results of the enterprise (Table 1); 3) the level of interest in harmonization of standards of Ukrainian enterprises activities; 4) the main problems (obstacles) of harmonization; 5) possible directions of activation of the PHUS at enterprises.

Table 1: Percentage Distribution of Respondents' Responses to the Impact of Harmonization of Standards on Business Activity

Impact assessment options	The size of the enterprise	Localization of the enterprise			
		Center	West	East	South
Increased satisfaction with the work of employees of the company	Large	24.3 / 24.1	30.6 / 30.8	14.4 / 14.2	16.3 / 16.5
	Medium-sized	28.6 / 28.5	33.3 / 33.6	21.9 / 21.7	13.7 / 13.2
	Small	75.8 / 75.4	71.9 / 72.4	68.9 / 68.5	61.4 / 61.8
Reduced staff turnover	Large	21.6 / 21.9	14.3 / 14.3	17.6 / 17.9	37.5 / 37.3
	Medium-sized	25.7 / 26.1	28.1 / 28.5	28.6 / 28.5	14.6 / 14.4
	Small	46.8 / 46.4	42.6 / 42.8	30.6 / 30.8	42.8 / 42.2
Labor productivity growth	Large	42.6 / 42.9	47.5 / 47.3	27.4 / 27.1	29.1 / 29.4
	Medium-sized	39.2 / 39.5	48.5 / 49.0	21.3 / 21.5	22.9 / 22.5
	Small	78.5 / 78.7	69.6 / 69.4	51.9 / 51.4	50.7 / 50.2
Improving working conditions and job quality	Large	86.9 / 86.7	81.7 / 81.3	69.5 / 69.0	71.4 / 71.6
	Medium-sized	87.1 / 87.3	75.4 / 75.0	62.4 / 62.4	69.8 / 69.1
	Small	95.4 / 95.1	91.6 / 91.3	75.6 / 75.1	80.1 / 79.7
Organizational development of the enterprise and labor relations	Large	55.2 / 55.4	52.4 / 52.7	42.5 / 42.7	39.9 / 40.3
	Medium-sized	68.8 / 69.3	67.3 / 67.4	49.1 / 49.6	51.4 / 51.2
	Small	82.8 / 81.5	95.6 / 95.2	71.7 / 71.2	71.8 / 71.3

Source: compiled by the authors according to the results of the survey

Table 1 shows the percentage split of respondents' answers to 2nd block of questions (concerning the impact of the PHUS on the results of business activity of enterprises) in February 2020 and October 2017. In order to illustrate the answers of the respondents in this article, we chose block 2 for the following two reasons. The first reason is that in the course of the survey, the managers of the surveyed enterprises were most interested in answering questions related to current activities. This involvement has its reasons: executives are mostly focused on management of operational functions rather than development of enterprise strategies. The second reason is that there was no need to provide an extended analysis of the answers to all the question blocks, as the correlations between the variables (i.e. the answers of the executives) and the factors (i.e. the size and localization of the enterprises) are similar enough for all the blocks of the questionnaire. Please pay attention to the practical absence of changes in the perception and evaluation of the PHUS by the heads of the surveyed enterprises, despite of the pretty long time distance between the first and the second survey (2 years and 4

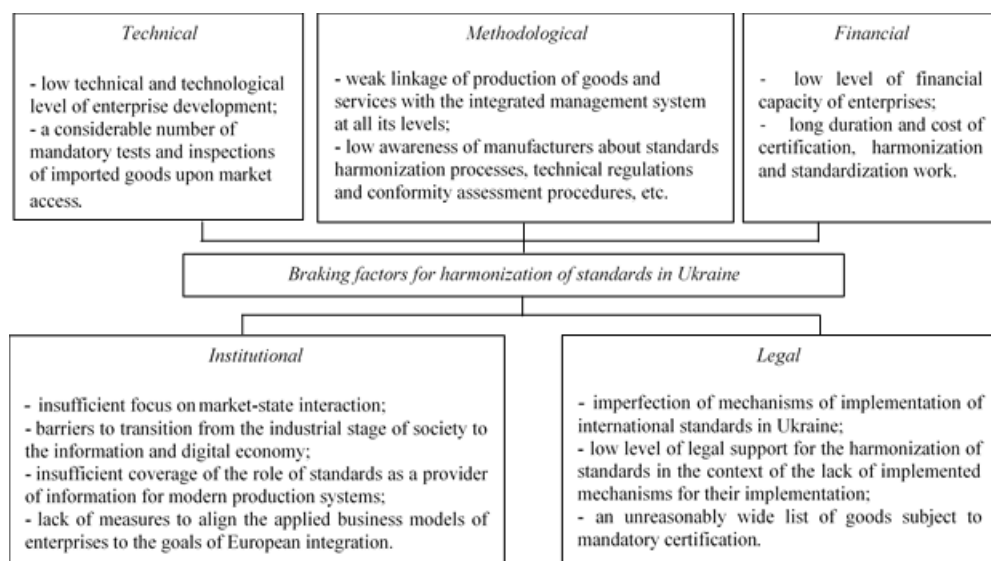
months). The difference between the two surveys is almost equal to the statistical error. We consider this fact as an evidence of inadequately low activity of the state in explanation in the information field of Ukraine of the importance of PHUS, and as a consequence, a corresponding underestimation of the importance of these processes for increasing the efficiency of their activity by business leaders. Survey has also revealed the dependence of evaluations on the size and location of the enterprise. The above figures indicate that the PHUS positive impact assessments of small enterprises with localization in the Center and the West of Ukraine are significantly higher. In our opinion, this proves once again that small business representatives are the most flexible, adapt quickly to changes in the environment and quickly implement changes in their activities. In addition, simplified international standards (such as International Financial Reporting Standards, etc.) have been developed for small businesses. As for representatives of big and medium business, they are more inert and underestimate the practical importance of harmonizing standards in business entities. Along with this, according to Table 1 in the East and South of Ukraine there is much greater resistance and a lack of a favorable attitude towards the PHUS by all categories of enterprises. Although in these regions, small businesses also show greater loyalty to PHUS. We are convinced that regional differences in the assessment of the surveyed processes are a direct result of the underestimation of the detrimental effect of false information concerning European integration by the representatives of the old system, which was discussed in the introduction.

The biggest differences are revealed between the evaluation of the indicator "Increase of satisfaction with work of employees of the enterprise" by representatives of small and large enterprises. Answering the questions of this block, small business executives pointed to the interdependency between standards implementation and customer loyalty, and hence the growth of labor productivity indicators, which in turn had a positive impact on the level of job satisfaction. The low rating of this indicator by the managers of large and medium-sized enterprises is explained by the formal approach to the implementation of standards at these enterprises. As a result: there is a negative dynamics of financial and economic indicators (due to reduced market share, reduced sales) and social and labor (due to reduced productivity, high levels of staff turnover, high level of employees involved in processes with harmful or even hazardous working conditions, reduced costs of environmental protection, etc.). At the same time, the closest in value were the evaluations of the indicator "Improvement of working conditions and quality of workplaces" by all groups of enterprises. Respondents of all enterprise categories noted the positive impact of implementing standards on the quality of the physical environment of their work. However, it was important for the analysis to identify discrepancies between high ratings of "working conditions" and low ratings of "job satisfaction". Such differences between indicators, which should be closely connected, are as well explained by the formal approach to PHUS, which results a mismatch between the improved physical environment and the complex psychological atmosphere in the enterprises. Particular attention was paid to the development of standards aimed to improve relations in the "enterprise – client" or "enterprise – partner" systems. However, in systems of "manager – subordinate" or "employee of department A – employee of department B", relations are often still based on principles that are far from the ethics of business.

We provide as well a brief summary of the most important findings from the evaluation of other blocks of the questionnaire. In determining the level of awareness by the managers of the goals of the harmonization of standards, we found out that most executives of large enterprises continue to manage inertial. They often consider harmonization of enterprise standards in the context of EU integration as an additional waste of time and resources that does not bring a rapid profit growth. Contrary to the above statement, the low activity in the area of standards harmonization and compliance to some extent leads to slow organizational

development of the enterprise. Most respondents agreed that harmonization of standards should be based on strategic analysis and implementation of perspective changes in the external and internal environment of the enterprise. However, among the main reasons for the lack of interest in harmonizing the standards of the organization, more than 35% of the heads of large enterprises stated that they were not motivated by the authorities to develop harmonization processes. 26.7% of respondents in Eastern and Southern Ukraine stated that they had no knowledge of the ways and directions of strategic development of the enterprise based on the implementation of harmonized standards. 21.1% of respondents from the large enterprise group called the stereotype of thinking a reason for their lack of interest in harmonization of standards. Respondents indicated a low level of interaction between government agencies and the market mechanism (as noticed by 49.2% of respondents from large enterprises); as well as the underdevelopment of institutions that drive the economy to information and digital (61%). Summarizing and comparing the data obtained during both stages of the study, we have identified several groups of brake factors for harmonization of standards in Ukraine (Fig. 1).

Figure 1: Factors that Hinder the Process of Harmonization of Standards in Ukraine



Source: compiled by the authors according to the results of the survey

Based on the figures of Fig. 1, we developed measures aimed to reduce the negative impact of the described factors.

- **Institutional factors.** Standardization functions should be delegated to private organizations. An example of the European Union, where private entities are the national standardization authorities, convinces of the effectiveness of this approach. In Ukraine the central executive authority for standardization is the Ministry of Economic Development, Trade and Agriculture. In particular, the functions of the national standardization authority are performed by the State Enterprise "Ukrainian Research and Training Center for Problems of Standardization, Certification and Quality", whose efficiency in this area is low (Skladaniuk, 2009; Bondarenko and Valaha, 2012).

- **Legal factors.** Public policy should focus on the improvement of legal mechanisms aimed at regulating social relations that arise in the field of standardization. It is necessary to concentrate on the following types of work: planning the work of technical committees to develop standards for goods and services; improving the legal framework that will facilitate the development of standardization documents and make the types of goods and services required to standardize.
- **Financial factors.** Ensure the satisfaction of consumer requirements in the development of export potential, facilitate the search and attraction of strategic investors, expand the network of training courses on standards implementation, resource management.
- **Methodological factors.** Raise awareness of the principles, sequences, algorithms and basic steps of harmonization.
- **Technical factors.** Prepare and implement in Ukraine normative legal and regulatory documents in the field of safety and quality, requirements that are harmonized with recognized international standards and European legal and technical standards.

4. Conclusion

So, to summarize all of the above, it should be noted that harmonization of standards is an important part of the general theory of standardization and an integral element of Ukraine's integration into the EU. First of all, harmonization of standards (bringing national standards in line with European and international ones) provides an opportunity to significantly improve the efficiency of enterprises and their competitiveness.

In the period 2014-2020, the work on harmonization of standards was intensified in Ukraine, in particular: there were passed horizontal framework laws, created and maintained institutional capacity developed and revised technical regulations, introduced European standards with simultaneous abolition of conflicting national and interstate standards, legally prepared membership in international organizations, etc. However, an analysis of the perception of harmonization processes by business executives showed that there is a significant difference between the evaluation of these processes depending on the size and location of the enterprises. Representatives of small enterprises located in the Centre and the West of Ukraine were most aware and loyal in their evaluations, which indicated the presence of negative factors in the way of harmonization of standards.

The analysis of scientific sources and the results of the questionnaire provided us with the opportunity to distinguish groups of brake factors of harmonization of standards in Ukraine, in particular: methodological, institutional, technical, legal, financial, social, information. According to the mentioned groups of factors, we offered measures to reduce their negative impact and to increase the efficiency of the processes of harmonization of standards with international and European ones. In turn, this will allow national producers to improve the quality of their goods to international requirements, to ensure the modernization of their production, to facilitate access to the international market.

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European Regulation of Fin-Tech Payment Services Providers and its Application in the Czech Republic

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Abstract

In 2015, Directive (EU) 2015/2366 of the European Parliament and the Council of 25 November 2015 on payment services in the internal market (hereinafter referred to as “PSD 2”) was adopted. This rule has expanded the possibilities for the provision of new payment services, namely account information services (hereinafter referred to as “AIS”) and payment initiation services (hereinafter referred to as “PIS”). This legislative step created space for market entry of payment service providers to entities known as Fin-Tech companies. The aim of the paper is to analyze and evaluate the changes in the payment market in the Czech Republic in comparison with selected EU countries after the implementation of PSD 2, using methods of description and comparative analysis. The authors base their research on the following hypothesis: “The European regulation of payment services according to PSD 2 did not bring a significant expansion of competition in their provision in the Czech Republic”. The presented contribution proves and demonstrates its truthfulness.

Keywords: Fin-Tech, innovation, license, payment services, regulation

JEL Classification: G23, K20, O36

1. Introduction

In 2005, Directive 2007/64 / EC of the European Parliament and of the Council of 13 November 2007 was adopted on payment services in the internal market directives 97/7 / EC, 2002/65 / EC, 2005/60 / EC and 2006/48 / EC and repealing Directive 97/5 / EC (EUR-Lex, [online], 2007) (hereinafter referred to as “PSD 1”), which introduced a completely new concept in the field of payments, namely the category of payment services. By this regulatory step, the European Union (hereinafter referred to as “the EU”) created the conditions for increasing competitiveness in the area of providing selected payment system products, resp. payment services. The obligation to transpose this PSD 1 into the national legal orders of the EU Member States was set for 1 November 2009.

With effect from 13 January 2018, the so-called PSD 2 was transposed into national legal systems, which was Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, namely Directives 2002 / 65 / EC, 2009/110 / EC and 2013/36 / EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64 / EC (EUR-Lex [online], 2015), hereinafter referred to as “PSD 2”. With the efficacy of PSD 2, there has been talk of Fin-Tech payment service providers.

2. Problem Formulation and Methodology

PSD 1 also allowed selected payment services to be provided by non-bank providers. PSD 1 has put into practice such entities as payment institutions (hereinafter referred to as "PSP"), a small-scale payment service provider or a payment service provider, electronic money institution or small-scale electronic money issuer. PSD 2 then introduced one more entity, which was designated as the account information service provider (EUR-Lex [online], 2015). Although PSD 1 has been abolished and replaced by PSD 2, it has maintained the PSD 1 regulatory requirements, as amended, and extended the existing payment services with two brand new ones - PIS and AIS.

These services can be characterized as follows (EUR-Lex [online], 2015):

- PIS means a service to initiate a payment order at the request of the payment service user with respect to a payment account held at another payment service provider.
- AIS means an online service to provide consolidated information on one or more payment accounts held by the payment service user with either another payment service provider or with more than one payment service provider.

These facts have created another possibility in increasing the competitiveness of non-banking payment service providers over traditional ones, such as banks and eventual savings and credit cooperatives. Practice, but also theory, began to call these providers as "Fin-tech" companies.

The authors based their research on the assumption that European regulation, when introducing PIS and AIS, assumed that Member States would use the set rules not only to create legal prerequisites for increasing the competitiveness of non-bank payment service providers, but that this legislation would also have a positive impact in practice. Therefore, the authors proceeded from the hypothesis that consisted of the following thesis: "The European regulation of payment services according to PSD 2 did not bring a significant expansion of competition in their provision in the Czech Republic".

In order to verify the hypothesis, the authors investigated the level of licensing of PIS and AIS payment service providers in the Czech Republic and selected EU countries. Their research was based on classical research methods, which were methods of description and subsequent comparison. Based on these results, then they can form a conclusion.

3. Problem Solution

In their research, the authors first defined the principle of the Fin-Tech category based on the approaches of selected authors. Subsequently, they analyzed payment service providers in the Czech Republic and selected EU countries.

3.1. *Fin-Tech and its characteristics*

It can be said that the Fin-Tech category as such appears in many texts of scientific or technical articles, books or treatises. There are a number of definitions that could be used. For example, a broader characterization according to Das (Das, 2019) states that "Fin Tech refers to various financial technologies used in automated processes in the financial sector, from routine, manual tasks to nonroutine, cognitive decision making. Various areas of finance are subject to disruption, such as payment systems, contract checking, trading, risk management, quantitative asset management, lending, mobile banking, customer retention, and investment banking". According to (Arner et al., 2017) "Fin-Tech refers to the use of technology to deliver financial solutions and one aspect of these fundamental changes".

A relatively broad characteristic was used by (Parker et al., 2017) who stated that “Fin-Tech is a portmanteau of financial technology that describes the emerging financial services sector in the 21st century. Originally, the term applied to technology applied to the back-end of established consumer and trade financial institutions. Since the end of the first decade of the 21st century, the term has expanded to include any technological innovation in the financial sector, including innovation in financial literacy and education, retail banking, investment and even crypto-currencies like Bitcoin”.

The Czech Fin-Tech Association defines this term as follows “An area that brings innovative solutions to financial services. Using modern tools and processes, fin-tech offers financial services cheaper and more conveniently making them more accessible to all” (CFTA [online], 2019).

Some foreign literature (Dorfleitner, 2017) then divides Fin-Tech companies into the following four basic segments:

- financing, including crowdfunding,
- asset management, focusing on investment, robotic consulting,
- payments, namely alternative payment instruments, cryptocurrency trading;
- other Fin-Tech companies, such as InsurTech companies, which combine the insurance and technology sectors.

In this context, it is worth considering what entities can be considered Fin-Tech companies according to the above definitions and characteristics. These can be understood in particular:

- start-up companies,
- current banks and other PSPs,
- a combination of the two above.

The European Commission characterizes Fin-Tech as “... implementing new technological processes, processes, business models that transform the traditional understanding and process of providing banking and payment services” (EC [online], 2019). The authors proceeded further from this definition, because in their opinion it best describes the links to PSD 2.

3.2. Open banking

So-called “Open Banking” is a challenge for existing and new payment service providers, with the opportunity to completely change their view of current understanding of financial services. The new AIS and PIS payment service providers, in the context of the current PSP's obligation to disclose client data, create scope for an overall transformation not only in the execution of payment transactions but also, of course, in the creation of innovative services and products. As of September 14, 2019, banks and other payment account providers are required to make their Application Programming Interface (API) available to the third parties. Since the entry into force of PSD 2 in January 2018, the professional community has been referred to as a revolutionary change that will be followed by the creation of new third party providers (TPPs). Entities providing indirect payment order services and payment account information services prior to the entry into force of PSD 2 were able to use their existing services during the transitional period from January 2018 to September 2019, but after that period they had to have the appropriate authorization in the form of a CNB license. Therefore, the transitional period was set for a relatively long period of time, on the one hand, to test the API interface and, on the other, to obtain a license from TPP.

And precisely in obtaining a license based on European regulation reflected in PSD 2, respectively then in the national transposition within the ZPS the authors see quite a problem, because despite a relatively long transition period, only a few entities were able to obtain a license to provide PIS and AIS services (until November 2019).

3.3. Payment service providers and their licenses under PSD 2 in the Czech Republic

In the Czech Republic, banks and credit unions automatically hold the appropriate authorization and therefore there is no need for additional licensing procedures. This is valid for both AIS and PIS. The payment account information service includes three additional entities that can provide the service after the conditions are met. As of 14 November 2019, only two entities are allowed to make an indirect payment order beyond banks and credit unions. The list of entities authorized to provide AIS and/or PIS services in the Czech Republic as of this date is as follows:

Table 1: Number of entities authorized to provide AIS and/or PIS services in the Czech Republic

	Total number of entities	AIS licensed	PIS licensed	PIS and AIS licensed
Banks and branches of foreign banks	49	0	0	49
Credit unions	9	0	0	9
Payment institutions	28	0	0	1
Electronic money institutions	2	0	0	1
The account information service providers	2	2	-	-

Source: author's own processing according to (CNB [online], 2020a).

https://apl.cnb.cz/apljerrsdad/JERRS.WEB15.BASIC_LISTINGS_RESPONSE

Despite all the expectations that may have arisen prior to the implementation of PSD 2 due to the disruption of banks' monopoly in the provision of payment services, it can be concluded that at present only 4 other institutions outside the banks and credit unions are licensed by CNB according to PSD 2. One payment institution and one electronic money institution were licensed for both the new AIS and PIS payment services. As of the monitored date, two entities had a payment account information manager license. It should be noted, however, that the authorization to provide the services in question was granted long after the PSD 2 entered into force on 13 January 2018. The first AIS license was granted on December 28, 2018. The next AIS license was only granted on June 12, 2019. Payment institutions and electronic money institutions were licensed in September 2019. This long licensing process could be caused due to a transitional period ending September 14, 2019 which was tuned to APIs interface on the one hand, but also due to ambiguous needful requirements to obtain appropriate authorization by the CNB. This issue was also presented to the Ministry of Finance, which on 20 May 2019 allowed applicants to comment and provide the Ministry with feedback in connection with the individual issues they encountered during the licensing procedure. Based on replies from 10 respondents, it was found that six out of ten respondents encountered various obstacles in the course of the procedure. Furthermore, the length of the proceedings themselves and the lack of communication between the supervisory authority and applicants were criticized by respondents (MF CR [online], 2019).

3.4. Payment service providers and their PSD 2 licenses in selected EU countries

Creating a healthy competitive environment across EU Member States has been one of the objectives of PSD 1, and at the same time it is the goal of the current and effective PSD 2. Integration of markets allows entry of payment service providers beyond their home country within the principle of a single European license. Under a license granted by the home supervisory authority, entities have the possibility to operate their services in the territory of another Member State without having to apply for a license or authorization from their supervisory authority. Free movement creates the opportunity to enter other markets beyond the home country, increasing competition and creating room for a wider range of products, solutions and services. The provision of services across Member States may be carried out in the form of a branch or without a branch through an authorized representative. Individual supervisory and supervisory bodies announce the intention of PSP about providing of cross-border services to the supervisory authority in the Member State, which shall notify the supervisory authority in the State in which the entity wishes to operate. This process therefore allows, under a single license granted by the home State, the entry of operators to all markets within the EU, thus creating scope for the free movement of services and capital. This is also linked to the new AIS and PIS services. At present, as of November 25, 2019, the following number of entities operates across borders:

Table 2: Number of entities operating cross-border in the Czech Republic who are authorized to provide AIS and/or PIS services

	Total number of entities	AIS licensed	PIS licensed	PIS and AIS licensed
Foreign payment institutions and branches of foreign payment institutions providing cross-border services in the Czech Republic	469	1	4	21
Foreign account information service providers providing cross-border services in the Czech Republic	12	12	-	-
Foreign electronic money institutions providing cross-border services in the Czech Republic	217	2	3	6

Source: author's own processing according to (CNB [online], 2020a).

https://apl.cnb.cz/apljerrsdad/JERRS.WEB15.BASIC_LISTINGS_RESPONSE

Competition on the Czech payment services market is mainly created on the basis of a single license through cross-border operations of entities. Of particular note are the individual dates for granting appropriate authorizations to operate AIS and PIS services. Compared to the Czech Republic, where the first license was granted to the AIS payment account information manager only at the end of 2018, some entities abroad obtained the appropriate authorization already on the day of entry into force of the Directive or shortly thereafter. This can be inferred from the preparedness of the supervisory authorities of the given EU countries, which allowed the application of licenses related to new payment services before PSD 2 came into effect, thus creating space for the application of these services to their existing or new products as soon as possible. For example, the CRIF Real Time, Ltd. Payment Account Information Manager, which provides client risk profile determination services. The company obtained a license from the competent licensing authority in the United Kingdom ('UK') on 13 January 2018 that is to

say exactly on the date of entry into force of PSD 2 and PSD, respectively its transposition into national legal orders of EU countries (Token [online], 2019).

However, it is not only a payment account information manager, but a similar analogy applies to payment institutions. An example is Token. io, Ltd., which obtained a license to operate AIS and PIS on 25 April 2018 also from the UK supervisory authority. This entity focuses on aggregating data from payment accounts and provides a basic API infrastructure to implement for individual banks and other PSPs. As of November 25, 2019, the company operates in 19 EU countries and has more than 3,000 payment account providers linked to its database via the API (Token, [online] 2019).

As of January 14, 2020, 230 electronic money institutions are providing their services in the Czech Republic (CNB [online], 2020a). In a more detailed view, a total of 11 entities have a license to cross-border AIS and / or PIS services in the Czech Republic. As was the case with foreign administrators of payment account information and payment institutions, the first AIS and PIS service licenses were already granted on the date of entry into force of the PSD 2. For example, Skrill, Ltd., which provides payment accounts and focuses on trading a wide range of cryptocurrencies. This entity was licensed by the UK supervisory authority to provide PIS and AIS on 13 January 2018 (Skrill [online], 2019).

The supervisory authorities in certain Member States, as can be seen from the various dates for granting the appropriate licenses, made it possible to apply for the extension of the new AIS and PIS payment services before the PSD 2 came into effect. It is not only the UK whose sample was used in comparison above, but also other EU countries, namely Belgium, Lithuania, Latvia (EBA, [online], 2019). Again, it is interesting to note that some supervisory authorities have fairly clearly defined licensing conditions and therefore larger companies that are interested in providing these new services benefit from pan-European entry through these countries on the basis of the single license principle. By way of example, the authors may mention Lithuania, which currently provides 48 AIS and / or PIS entities, or Latvia, with a total of 45 entities on 26 November 2019 (EBA [online], 2019).

The above-mentioned facts regarding the approach of other EU countries in licensing under PSD 2 illustrate:

- a) unpreparedness of the supervisory authority in the Czech Republic,
- b) the inability of applicants for extension of the license within the meaning of PSD 2 to process the relevant documentation properly; or
- c) the unwillingness of the supervisory authority to grant such licenses.

However, as a common denominator, the authors see the inability or unwillingness of the supervisory and supervisory authorities to visualize a business model that would have the ability to disrupt banks' prepared business and generate profits for Fin-Tech companies.

4. Conclusion

Based on the above analysis and comparison, the authors are of the opinion that the supervisory and supervisory authority has not been prepared for licensing. On the one hand, the regulation made it possible to submit applications for licenses for new services under the PSD 2, but only after its entry into force in the national legal order. However, the proceedings were (and still are) lengthy despite the ZPS deadline. Unpreparedness can also be illustrated by the fact that it has not given a single entity on the level.

Based on the authors' experience with licensing procedures, it can be stated that all applicants pay the necessary and sufficient attention to the processing of the required documentation to

comply with regulatory requirements. However, it is not possible to deny the supervisory authority the effort to properly describe the whole process in the implementing legislation (CNB [online], 2020b). However, the unwillingness of the supervisor is only speculation by the authors.

In conclusion, this situation on the Czech financial market improves the competitive position of foreign Fin-Tech entities that have obtained the appropriate authorization in their EU country and can therefore enter the Czech market on the basis of a single European license. The following authors' hypothesis "The European regulation of payment services according to PSD 2 did not bring a significant expansion of competition in their provision in the Czech Republic" can be confirmed to the authors' regret as true. Having this in mind, further research will focus on analyzing the evolution of PSD 2 over the medium term.

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Tax Burdens in the Czech Republic and Other European Union Countries in 2008–2018

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Abstract

This paper focuses on the comparison of the development of tax burdens in the Czech Republic and other European Union countries between 2008 and 2018. The tax burden is an important factor in the decision-making of company management on the allocation of investments. Another important criterion is the administrative complexity of taxes and their total number in individual countries. Most European Union countries have a higher tax burden than within OECD. Individual states of the European Union are also characterized by different structures of tax burdens or tax mixes, as well as there being a high degree of variability between the first and last states. This paper also deals with testing statistical hypotheses about the change of the tax quota and individual groups of tax revenues within the tax mix of European Union countries in selected years, using the method of t-tests.

Keywords: Corporate Tax, Tax, Tax Burden, Tax Mix, Taxes in European Union

JEL Classification: H24, H25, E62

1. Introduction

The OECD warns that the tax burden in OECD member countries is the highest in the last 50 years. The highest taxes are paid in Denmark, the lowest in Mexico. Taxes increased in most OECD member countries, while in the remaining seven countries the tax burden decreased. Most European Union countries belong to countries with a high tax burden. The tax burden in these countries exceeds the tax burden in some developed countries such as the United States, Canada or Japan. In 2009, however, the tax burden of the European Union countries decreased which was caused by the global economic crisis as well as a decline in gross domestic product and tax revenues (Szarowská, 2013) and (European Commission [online], 2019).

The higher tax burden of EU countries is, among other things, caused by a highly elaborated social security system as well as by the European Union itself and its Treaties since EU member states are obliged to incorporate EU regulations and directives into their national legislation. In the area of taxation, the tax policy is being harmonized, especially for indirect taxes which have a greater impact on the internal market than direct taxes. Some member states of the European Union have recently passed the tax burden to a greater or lesser extent on a consumption, especially by raising VAT rates and excise taxes. As for indirect taxes, value added tax was the largest source of revenue for public budgets. The harmonization of direct taxes is not so consistent as they are more focused on investment activities or the formation of new trading companies, and their harmonization is so very slow (Hakalová, Palochová, Pšenková and Bielíková, 2018).

As stated by Krajňák, Krzikallová (2016), there are other factors that affect business entities when trading in the internal market and which are essential when trading with foreign countries.

Šíroký (2016) also points out that the European Union project of Common Corporate Consolidate Tax Base is also important in this area as it prevents or reduces harmful economic competition, particularly in the area of corporate taxation.

1.1 Tax Burden in European Union Countries

The tax burden and its changes have a large impact on government revenue and thus constitute a major component of all government revenues. On the other hand, a high tax burden, or more precisely the complexity or tax system level, can be one of the important factors when deciding on the allocation of investments. A high tax burden may also lead to weaker economic growth or a decline in investment in a country. Taxes can also have an impact on production technologies, resource efficiency, savings, etc. (Sinevicienea and Railienė, 2015).

Stankevičius and Vasiliauskaitė (2014) state that taxes can also have an impact on countries shadow economies. Vintilă, Onofrei and Țibulcă (2018) state that in most EU countries, a high tax burden and the associated bureaucracy can even reduce the confidence of business environment towards tax policy makers.

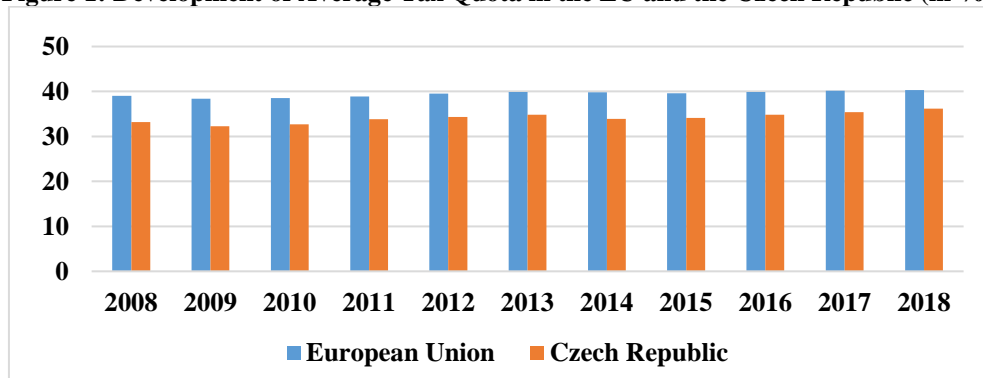
In recent years, the tax burden has gradually shifted from direct taxes to indirect taxes within the European Union. An unfavourable consequence of this trend is, among other things, an increase in the prices of products or services as indirect taxes are part of their valuation. The decrease in the tax burden on direct taxes is caused, for example, by a decrease in tax rates of individuals and legal persons. This can also be observed in the Czech Republic where the corporate income tax rate has been gradually decreasing since its inception (Bajus, Hudáková–Stašová and Gál, 2015).

Member countries expect an inflow of foreign capital and profit growth from the decline in tax rates. The transfer of profits or tax bases represents the so-called tax competition. However, it should be noted that a tax rate or tax issues in general is not the only determining factor for potential investors. Countries with a high tax burden may also be characterized by a highly sophisticated quality of public services provided or a stable business environment (Mihóková, Andrejovská and Martinková, 2018) or (Blechová, 2016).

It is equally important to look at the tax competition from two perspectives. A positive tax competition can also have a positive effect on the quality of public finances and tax collection itself (Smith, 2008). Stiglitz and Rosengard (2015), on the other hand, point out some negative aspects of tax competition when a tax entity uses high-quality public services in a country with a high tax burden but fulfils its tax liability in a country with a low tax burden.

A tax quota is most often used to measure the tax burden internationally; it represents the ratio of tax revenues to gross domestic product (GDP) in current prices in %. Tax revenues therefore include all tax payments (Kubátová, 2018).

Figure 1 shows the evolution of the average tax quota in the European Union and the Czech Republic in 2008–2018.

Figure 1: Development of Average Tax Quota in the EU and the Czech Republic (in %)

Source: Eurostat [online], 2020 – own processing

As can be seen from Figure 1 above, there has been a year-on-year increase in the tax quota within the European Union, except for the years 2009, 2014 and 2015. In 2009, there was a 1.5% decrease compared to 2008 (the highest year-on-year decrease was recorded in Bulgaria, up to by 12%). This decline occurred mainly due to the global economic crisis. Between 2011 and 2013 and since 2016, there is a year-on-year increase in the tax quota. In 2012, the tax quota increased year-on-year, namely by 1.5% compared to 2011. This growth occurred also due to lower GDP growth or the introduction of higher VAT rates. Šíroký, Maková (2014) present the development of VAT rates. The highest tax burden in the European Union in 2018 was 48.4% in France and 47.2% in Belgium. By contrast to that, the lowest tax burden in the European Union in that year was recorded in Ireland at 23% and also in Romania at 27.1%.

In the years under review, the tax quota has changed most in Greece; it reached 33.7% in 2008 and increased to 41.5% in 2018. In Denmark or Slovenia, on the other hand, the tax quota has hardly changed at all (Eurostat [online], 2020). During the reference period, the Czech Republic's tax quota is below the EU average, with major year-on-year changes. In 2010, it decreased by up to 5.5% which was caused, among other things, by a reduction in income tax rates. During 2011–2014, there was an alternate year-on-year increase and decrease of the tax quota, and in 2011 it increased by 5.5%. Since 2014, it has been continuously growing year-on-year in the Czech Republic (Eurostat [online], 2020) and (European Commission [online], 2019).

2. Problem Formulation and Methodology

In the paper, we analyse not only the tax burden in EU countries over the past ten years, but also whether there has been a statistically significant change in the tax quota indicator in these countries in recent years as well as a change in the tax mix structure. In this paper we apply basic methods of scientific research such as analysis, synthesis, induction, deduction, or comparison method. We also use testing of statistical hypotheses about a change in the tax quota and a change in the tax quota of the tax mix.

Within the testing of statistical hypotheses, the Student's paired t-test method is applied at the significance level (α) of 5%. The test criterion (T) is determined according to the formula (1),

$$T = \frac{\bar{D} - \mu_0}{s_D} \times \sqrt{n} \quad (1)$$

where \bar{D} is the mean of the observed differences, S_D is the sample standard deviation, and n is the number of observations (Friedrich, Hradecký, Michalcová and Pomp, 2018) and (Anderson, Sweeney and Williams, 2011). Data for tax quota and tax mix analysis were obtained from the Eurostat database. The analysis focuses on all 28 EU countries for the period 2015/2016 and 2017/2018. A software solution of IBM SPSS Statistics 26 is used for the calculation.

3. Problem Solution

The following part deals with testing of statistical hypotheses about the change in the average tax quota and average changes in individual taxes within the tax mix in the European Union in 2015/2016 compared to 2017/2018. The null hypothesis (H_0) on the agreement of mean values is tested against the bilateral alternative hypothesis (H_1) on the difference of mean values. The results are shown in Tables 1 to 6.

Table 1: T-test on Average Tax Quota Change

Period	Mean	Count	Std. Deviation	Test criterion	P-value
2015/16	36.9196	28	6.1834		
2017/18	37.2232	28	6.1459		
				-1.8987	0.068

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H_0 : The average tax quota has not changed in the European Union in the periods under review.

H_1 : The average tax quota in the European Union recorded a statistically significant change in the periods under review.

Table 1 shows that the test criterion is -1.8987 and the p-value is 0.068. For this reason, we do not reject the H_0 . The p-value (0.068) > significance level (0.05) and, i.e., the change in the average tax quota in the periods under review is not statistically significant.

In the periods under review, the tax quota grew only in 9 EU countries (the highest growth was recorded in Hungary, up to by 1.4%). For the remaining 19 states, including the Czech Republic, the tax quota was reduced; the highest decrease, namely 1.7%, was recorded in Poland (Eurostat [online], 2020).

Table 2: T-test on the Average Change in the Share of Direct Taxes

Period	Mean	Count	Std. Deviation	Test criterion	P-value
2015/16	29.5053	28	10.5450		
2017/18	29.6054	28	10.6810		
				-0.5253	0.6037

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H_0 : The average share of direct taxes did not change in the European Union in the periods under review.

H_1 : The average share of direct taxes in the European Union registered a statistically significant change in the periods under review.

Table 2 shows that the test criterion is -0.5253 and the p-value is 0.6037 . For this reason, we do not reject the H_0 . The p-value (0.6037) > significance level (0.05) and, i.e., the change in the share of direct taxes in the periods under review is not statistically significant.

In the periods under review, the share of direct taxes increased in 13 EU countries; the highest growth was recorded in Romania – by 2.85% . The other 15 states, including the Czech Republic, recorded a decrease (the largest decrease was recorded in the Netherlands, by 2.3%) (Eurostat [online], 2020).

Table 3: T-test on The Average Change in the Share of Personal Income Tax

Period	Mean	Count	Std. Deviation	Test criterion	P-value
2015/16	20.1804	28	9.9193		
2017/18	20.1821	28	9.5924		
				-0.0102	0.9919

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H_0 : The average share of personal income tax did not change in the European Union in the periods under review.

H_1 : The average share of personal income tax in the European Union recorded a statistically significant change in the periods under review.

Table 3 shows that the test criterion value is -0.0102 and the p-value is 0.9919 . For this reason, we do not reject the H_0 . The p-value (0.9919) > significance level (0.05), i.e., the change in the proportion of personal income tax in the periods under review is not statistically significant.

In the periods under reviews, the share of personal income tax increased for up to 14 countries of the EU; the highest growth was recorded in Romania – by 2.05% . The other 14 countries, including the Czech Republic, recorded a decrease; the highest decrease was recorded in the Netherlands and Malta – identically by 1.75% (Eurostat [online], 2020).

Table 4: T-test on the Average Change in the Share of Corporate Tax

Period	Mean	Count	Std. Deviation	Test criterion	P-value
2015/16	7.6607	28	3.6521		
2017/18	7.8696	28	3.5867		
				-1.2608	0.8292

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H_0 : The average share of corporate income tax did not change in the European Union in the periods under review.

H_1 : The average share of corporate tax in the European Union recorded a statistically significant change in the periods under review.

Table 4 shows that the test criterion is -1.2608 and the p-value is 0.8292 . For this reason, we do not reject the H_0 . The p-value (0.8292) > significance level (0.05), i.e., the change in the corporate tax share in the periods under review is not statistically significant.

In the periods under review, the share of corporate tax increased in 11 EU countries, including the Czech Republic, with the highest growth in Latvia – by 1.15% . The other 17 countries

recorded a decrease; the highest decline was recorded in Luxembourg – by 2.1% (Eurostat [online], 2020).

Table 5: T–test on the Average Change in the Share of Indirect Taxes

Period	Mean	Count	Std. Deviation	Test criterion	P–value
2015/16	38.9214	28	6.8460		
2017/18	38.5446	28	6.8319		
				1.5531	0.1321

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H₀: The average share of indirect taxes did not change in the European Union in the periods under review.

H₁: The average share of indirect taxes in the European Union recorded a statistically significant change in the periods under review.

Table 5 shows that the test criterion value is 1.5531 and the p–value is 0.1321. For this reason, we do not reject the H₀. The p–value is (0.1321) > significance level (0.05), i.e., the change in the proportion of indirect taxes in the periods under review is not statistically significant.

In the periods under review, the share of indirect taxes increased in 18 EU countries; the highest growth was recorded in Romania – by 5.45%. The other 10 countries, including the Czech Republic, recorded a decrease; the highest decrease was recorded in Cyprus – by 1.45% (Eurostat [online], 2020).

Table 6: T–test on the Average Change in the Share of Social Contributions

Period	Mean	Count	Std. Deviation	Test criterion	P–value
2015/16	31.0536	28	10.0329		
2017/18	31.3232	28	10.1384		
				–0.7766	0.4442

Source: Eurostat [online], 2020, own calculation IBM SPSS Statistics 26

H₀: The average share of social contributions did not change in the European Union in the periods under review.

H₁: The average share of social contributions in the European Union recorded a statistically significant change in the periods under review.

Table 6 shows that the test criterion value is –0.7766 and the p–value is 0.4442. For this reason, we do not reject the H₀. The p–value (0.4442) > significance level (0.05) and, i.e., the change in the share of social contributions in the periods under review is not statistically significant.

In the periods under review, the share of social contributions, which represents the main source of income, increased in 13 EU countries, including the Czech Republic; the highest growth was recorded in the Netherlands – by 2.15%. The other 15 countries recorded a decrease, with the highest decrease being in Romania by 8.45% (Eurostat [online], 2020).

4. Conclusion

This paper dealt with the analysis of the tax quota and tax mix within EU countries in the years 2008–2018. The tax quota in these countries had been constantly changing over the years. In 2008, the tax quota was 39% within the European Union and 33.2% in the Czech Republic,

and in 2018, it reached 40.3% in the EU and 36.2% in the Czech Republic. In recent years, however, it has been growing slightly as in the Czech Republic. In contrast to that, the lowest tax burden is 23% in Ireland and 27.1% in Romania. The EU countries, however, do not reach the values of tax burden of selected countries that are part of OECD, such as Mexico where the tax burden is 16.1% or Chile where the tax burden is 21.1%. This is mainly due to the low social security income which is only a few percent in those countries, while it is the main source of income in the European Union. The highest year-on-year change in the tax quota within the European Union in the last 10 years occurred in 2009, as a result of the economic crisis that started in 2008.

Over the past 10 years, there has been a change in the tax mix of the European Union. Even though the average tax mix has changed many times in recent years, the changes cannot be considered significant. Using statistical hypotheses and a paired t-test, we have shown that in recent years (between 2015/2016 and 2017/2018) no statistically significant change has occurred in any component of the tax mix or in the tax quota itself as was the case with the global economic crisis which was also linked to a decline in gross domestic product (Kubátová and Borůvková, 2014) and (Mucha-Leszko and Twarowska, 2018).

Since this is an interesting and topical issue, the authors will continue with research of the problem in the future, for example in terms of development or changes in related legislation.

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"Enhanced" Risk Management in European Agriculture - Challenges from the Perspective of Common Agricultural Policy of the European Union after 2020

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Abstract

The concept of agricultural risk management has significantly evolved into a holistic risk management incorporating the resilience concept. Furthermore, there has been a plethora of environmental, political and socio-demographic determinants that affect public policies and markets tools in the area of risk management. The aim of the paper was to discuss selected challenges for risk management in agriculture from the perspective of the Common Agricultural Policy after 2020 (CAP 2020+). Our analysis employed inductive and deductive methods (incl. economic analysis of law). We presented the evolution of the concept of agricultural risk management, including some novelty aspects and we assessed its current state in CAP 2014-2020. We identified various associations between key objectives of CAP 2020+ and proposed risk management tools. The challenges faced by the system of risk management in CAP 2020+ may need a comprehensive approach and extensive actions at various levels of management, taken financial sustainability.

Keywords: *agricultural finance, Common Agricultural Policy, EU agriculture, risk management*

JEL Classification: *Q14, Q18, G32*

1. Introduction

Agricultural production has strong links with the environment and climate and it has been considered the most risky. Firstly, production risk resulting from weather conditions was an important challenge for peasants. Linking agriculture with the market has led to an increase in the role of price risk (Kulawik et al., 2018; Banterle and Vandone, 2019; Mateos-Ronco, and Server Izquierdo 2020). Currently, institutional risk has reflects legal, regulatory and agricultural policy changes that can radically tighten the conditions for agricultural activity (Hardaker, Gudbrand, Anderson and Huirne, 2015). The system of risk management in agriculture should be described as a holistic and systematic system that include political actors, farmers, insurers, market structures and set of instruments (Leppälä, 2016). Therefore, identifying relationship between the development of the concept of risk management and the impact of public policy instruments (in the case of EU countries - the Common Agricultural Policy, CAP) may have added value, taking into account the analysis of public policy mechanisms ex ante (CAP after 2020, i.e. CAP 2020+)

The aim of the paper was to discuss selected challenges for risk management in agriculture from the perspective of the Common Agricultural Policy after 2020 (CAP 2020+). Our analysis employed inductive and deductive methods (incl. literature review, economic analysis of law). We presented the evolution of the concept of agricultural risk management, including some novelty aspects and we assessed its current state in CAP 2014-2020. We identified various associations between key objectives of CAP 2020+ and proposed risk management tools.

2. Agricultural Risk Management – An Evolution of the Concept

Risk management in agriculture may be treated as a holistic and systematic system (Leppälä, 2016). The comprehensive proposal of Mußhoff and Hirschauer (2011) focuses on the perspective of the agricultural enterprise/farm. They distinguished activities oriented to early detection of threats, behaviours and procedures as well as intervention activities. The social, legal and political dimensions of risk management in agriculture have been highlighted in OECD's concept of holistic risk management (HRM) with six types of risk: natural (natural), health, social, economic, political and environmental, and then located them on three levels: (1) micro; as a specific risk affecting only individual households; (2) meso, i.e. affecting groups of farms or communities; (3) macro, i.e. systemic, referring to regions and even entire nations/countries (OECD, 2005; OECD, 2011). The concept of holistic risk management (HRM) in agriculture was initially treated as (a response to a traditional approach to this problem, i.e. as linear, sequential or static approach (OECD, 2005, OECD, 2011). The HRM identifies sources of risk for farms, instruments for farmers and strategies for managing risk. The relationships between these three components are not linear, but may be treated as a three-dimensional system to be able to analyse and model and design interdirectional relationships, interactions between them, feedback and advance and trade-offs, and thus treat them as a dynamic, holistic system. The aforesaid system combines risk management strategies of various types with public policies oriented to mitigating its effects (*ex post* dimension) and prevention (*ex ante* aspect). In 2013 the concept of HRM was modified. Therefore, a new level of 'community / informal solutions' in the matrix of risk management instruments and strategies was added. *Ex ante* activities involved crop sharing systems, shared resource management, social reciprocity, informal insurance communities, and savings/credit. In turn, the set of *ex-post* actions included, i.e. mitigating the effects of risk materialisation, includes the sale of assets and transfers from the joint support network. Finally, the novelty was presenting "informal strategies (at farm and local community level).

The emphasis on "resilience" results from long-term and constant uncertainty, which is caused by climate change and instability of markets, especially financial products and instruments. On the other hand, any actions increasing "resilience" also improve the quality of risk management. (Baldwin, Gray, 2018). The concept of "resilience" results from certain gaps in holism in the field of ex-ante instrumentation, the costs of using all management tools, existing trade-offs, policy optimization, strategies used by farmers, role governments, the potential to respond to uncertainty and ambiguity. As Baldwin and Gray (2018) enumerated several principles, one of them should be highlighted: *No-regret policy*. Public policies should aim to help farmers respond to uncertainty and risk, build sectoral capacities to better deal with them based on the provision of information and general agricultural services, and create a friendly environment for agricultural activities. The newest approach of OECD (November, 2019) refers to the updated concept of resilience as a practical approach to the design and implementation of political instruments in line with the idea of holistic risk management in agriculture (Baldwin and Antón, 2019). Problems of using digital technologies in early warning and ratemaking systems in traditional and index insurance; subsidizing agricultural

insurance; index contracts will be more important. However, the need to implement a pragmatic approach results from the fact that the programs implemented so far cannot be placed in the matrix of risk management levels within a holistic approach, usually their wider context of use and the sometimes increasing farmers' exposure to future risks are omitted.

The World Bank (WB) has significantly developed the concept of HRM as "financing of production risk in agriculture" (Mahul and Stutley, 2010) with three layers (the highest one refer to catastrophic risk). According to Hohl (2019), there is a four-layer risk management structure (similar to the structure that is presented by the WB) with a top, fourth layer for systemic risks of a really serious range where financial market institutions may appear. Hohl strongly exposes the interactions between intra-agricultural risk and risk located in food chains and networks. The concept of integrated risk management (enterprise risk management, ERM) includes methods and processes used for implementation the planned strategy of RM and achieving its goals. Both deviations in minus (downside risk) as well as in plus (upside risk) are analysed. ERM identifies all organizational risks, while in the "silo" traditional approach is fragmentary and inconsistent. The latest trend in the development of ERM is to combine it with the concept of business continuity management (Business Continuity Management, BCM) and related insurance against the negative effects of such an event (Business Interruption Insurance, BII). The niche in agricultural policies refers to building agricultural insurance into value chains in agriculture and food chains/networks (Hunziker, 2019).

3. Risk Management in Agriculture – Previous Experience

In general EU Member States (MSs) commonly financially support risk management in agricultural sector for years. In the field of budget supported mechanisms of risk transfer some measures were taken many decades ago. For instance, in Spain state supported agricultural insurance system was established by law in 1978. Similar scheme was introduced in Portugal in early 1980s. Greek Organization for Agricultural Insurance was established in 1961 (Bielza et al., 2009). Financing risk transfer through insurance instruments is only one channel through which risk management in agriculture is supported in selected EU MSs. Ad hoc aid addressed to agricultural producers who were adversely affected by natural catastrophes is even more popular instrument of risk management support. Throughout the years agricultural policy instruments designed to direct risk management support was implemented as a part of national agricultural policies. However due to rising production risk resulting from climate change, increasing price risk associated with CAP reforms, and growing prevalence of national policies aimed at supporting agricultural producers income stabilisation, instrument supporting risk management in agricultural sector are becoming more and more important part of CAP. In the following section essential aspects of EU as well as national agricultural policy instruments aimed at risk management support are described.

3.1. CAP 2014-2020

Although CAP affected the level of risk faced by agricultural producers since its beginning, it was always rather indirect impact. Early CAP was focused on setting agricultural prices at levels encouraging farmers to increase production. One of the various effects of implementing this policy was a significant drop of price risk. With MacSharry reforms EU rejected production supporting policy and turned into more market-oriented forms of intervention. Direct payments became one of the most important mechanisms of CAP. Although not designed to support risk management its role in decreasing farmers' income risk cannot be overestimated. It is true up to this day. Since direct payments are crucial source of income that is not put at price or production risk it significantly lower income risk of agricultural producers.

There are also programmes within CAP that indirectly lower production risks through investing or increase awareness and understanding of risk management processes through knowledge transfer.

As it was stated in recent years farmers' income risk in EU is rising. To help solving problem of high income risk in agriculture during the period of 2014-2020 within the Pillar 2 of CAP new instruments supporting risk management in agriculture were introduced. It was considerable innovation when comparing it with risk management support instruments included within CAP during the period 2007-2013. Then risk management support was initially limited only to financing mutual funds and harvest insurance in the fruit and vegetables and wine sector within Pillar 1. The Health Check reform extended possibilities of supporting risk management within CAP. Any MS could use up to 10% of direct payment envelopes in supporting risk management instruments. However the scale of the intervention was small especially in the fruit and vegetables and wine sector with exception of Italy. Only France and Italy move considerable amount of money from direct payments to harvest insurance (European Parliament 2016).

Within the Pillar 1 CAP 2014-2020 harvest insurance and mutual for producers in the fruit and vegetables and wine sector funds financed has been retained. Germany, Italy, Cyprus, Portugal, Romania, and Slovakia implemented these measures in wine sector, however only in Italy the scope of programmed intervention was significant and exceed the value of 100 million euro (European Parliament 2016). Considerable changes concerned to risk management support within CAP 2014-2020 refers to Pillar 2. There were three new instruments that could be introduced by MSs. For each of them the aid was limited to 65% of incurred costs and the threshold for indemnities is 30% of the average annual production or income in the preceding three-year period or for five-year period without the highest and the lowest observations.

The first instrument designed to help stabilising farmers' income within Pillar 2 was crop animal and plant insurances, where cost of premiums are financed from public funds. The next option is to finance administrative costs of setting up mutual funds operating as insurer for agricultural producers. Also cost of loans in case of indemnities accumulation can be financed within Pillar 2. The third instrument is completely new in CAP and it is Income Stabilisation Tool (IST). This measure deals not with the production risk, as it is the case for two previous instruments, but with the whole income risk. Income is understood as the sum of revenues, together with subsidies, a minus input costs. IST scheme was to be organized like the mutual fund and it compensate of up to 70% of income losses higher than 30% of historical income.

Although risk management programmes are becoming more and more popular among developed countries, less than half of MSs decided to support reduction of farmers' risk using three mentioned above instruments within Pillar CAP. Twelve MSs and some only in selected regions introduced one or more of these instruments. In ten MSs insurance premium was subsidized within CAP. Programmed sum of financial support of insurance premium in EU was to be over 2200 million € with the largest share in Italy (1397 M €), France (541 M €), and Hungary (76 M €). Only three countries (Romania, Italy, and France) decided to support establishing mutual funds. The total planned expenditures on this measure equals 357 M €. Also IST was not commonly used by MSs as risk management support instrument. There were attempts to implement IST only in Hungary, Italy and Spanish region of Castilla y León and total expenditures equalled 130 M € (European Parliament 2016).

There are many reasons why interest in implementing proposed measures within Pillar 2 was limited. In case of mutual funds and IST the most important is the fact, that there was lack of experience in implementing such instruments, and what's more, there was no proper guidelines

from DG Agri. The 30% threshold, which was set so high in order to be in compliance with WTO Green Box criteria, can also be seen as a significant impediment. It was especially the case for insurance schemes (European Commission, 2017).

3.2 State Aid

Much more common among MSs is supporting risk management in agriculture using state aids. This way of implementing policy instruments is acceptable by EU if MS regulations meet specific requirements. Every MS makes use of state aid to support income stabilisation among its farmers. The most widespread instrument is ad-hoc disaster payments. It is used by every MS. During the period 2007-2013 cost of ad-hoc compensations in EU MSs was two times higher than the sum of all other risk management support programmes (European Parliament 2016). This measure is highly undesirable due to its unpredictability what is incompatible with planned budgets. Although every MS attempts to resign from this kind of measures, it is very difficult when insurance is still far from being widely used by farmers.

Many MSs struggle to increase low level of participation in agricultural insurance schemes. Public expenditures on production insurance are the second highest after ad-hoc support among any risk management support instruments. In Spain, Italy, Poland and some other MSs agricultural production insurance are heavily subsidized. There are also countries like Greece, Cyprus, and partially Poland, where production insurance for farmers is obligatory. There are wide variety of number of crop and animal types of production covered as well as the level of support among European countries. Despite financial or regulatory incentives many farmers are not interested in buying insurance cover. Of the many reasons systemic risk in agriculture (drought, flood, epidemic diseases) which makes prices of insurance policies too high is the most important factor decreasing level of participation in insurance schemes. Unsatisfactory level of compensation are also important factor. In countries where agricultural insurance are not subsidized and are provided on market terms (e.g. Germany or Great Britain) only selected perils are insured relatively common. Among them hail perils are prevalent since this kind of losses are not exposed to high systemic risk and the historical data about occurrence of hail losses are easily available for insurers.

Production insurance is the most common form of insurance cover in European agriculture. Revenue or income insurances are still in development stage in EU. However there are a lot of opportunities to manage price risk in agriculture but they are all offered on market-based terms. It is also worth mentioning that production insurance does not cover wide range of risks or production types. In general the more heavily subsidized schemes, the more risks and the bigger share of possible production types can be covered by purchasing insurance policy.

4. CAP 2020+ – Its Basic Objectives and Instruments vs. Risk Management Tools

In 2018 the European Commission (EC) presented its proposals for the CAP 2020+. The specific objectives to be pursued by the CAP during the coming programming period are:

- support viable farm income and resilience across the EU territory to enhance food security;
- enhance market orientation and increase competitiveness including greater focus on research, technology and digitalisation ;
- improve farmers' position in the value chain;
- contribute to climate change mitigation and adaptation, as well as sustainable energy;

- foster sustainable development and efficient management of natural resources such as water, soil and air;
- contribute to the protection of biodiversity, enhance ecosystem services and preserve habitats and landscapes;
- attract young farmers and facilitate business development in rural areas;
- promote employment, growth, social inclusion and local development in rural areas, including bio-economy and sustainable forestry;
- improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, as well as animal welfare (European Commission, 2018).

Risk management is not mentioned explicitly in this list. Yet, supporting “viable farm income and resilience” (European Commission, 2018) is clearly linked to risk management. Moreover, it is stated that “robust framework should be set up to ensure appropriate risk management” (European Commission, 2018). Therefore, there is a need for a “Union-level platform on risk management for capacity-building in order to provide farmers with adequate financial instruments for investments and access to working capital, training, knowledge transfer and advice” (European Commission, 2018).

The EC proposed to keep the currently available instruments - insurance premia and mutual funds, which relate to both production losses and income stabilisation. This shows that the EC does not expend the choice of tools for risk management. Moreover, it leave the decision whether to apply the existing instruments to member states, which are obliged to ensure that the implementation of these tools contributes to achieving the specific objectives of the CAP. Member states also have to specify the types and extent of coverage of insurance schemes eligible for support as well as the methodology for the calculation. The EC proposed a limit of 70% of eligible costs as a maximum rate of support and the minimum scale of losses that can trigger compensation at the level of 20% of the average annual production or income in the reference period.

It can be stated that apart from the actual risk management tools offered within the CAP, there are also other tools that can strengthen risk management. These indirect tools include support for knowledge transfer among different stakeholders, vocational trainings and access to advice offered by farm extension services. These can play a vital role in improving farmers knowledge and skills in risk management tailored to their specific needs. Yet, the question is whether these tools are effectively used to achieve this goal. Also within the set of these indirect risk management tools EC proposed no new instruments and their use is also subject to the decisions of individual member states.

Also direct payments are part of the set of tools that can act as risk management tool as they play a role of income stabilisation instrument. Yet, given the envisaged cut in the CAP budget the actual impact of direct payments and other CAP instruments can decrease and thus undermine the risk management capacity of the EU agriculture.

In the programming period 2014-2020 the risk management tools have not gained much popularity and only several member states applied them within their rural development programmes (Soliwoda et al., 2016, tab. 13). It is hard to assess whether in the coming period this situation can change. As the impact of climate changes becomes ever more visible all the stakeholders see the need to improve risk management in agriculture, but there is not much done to actually achieve this goal. What is needed is in-depth knowledge of the actual situation in agriculture so data and data sharing are the key prerequisites for strengthening risk management in the EU agriculture.

Risk management tools proposed for the CAP 2020+ are part to the set of instruments that are to contribute to achieving the CAP specific objectives. The direct risk management tools can play an important role in supporting economic and social objectives, while their role in environmental objectives will not be significant (tab. 1).

Table 1: Proposed CAP 2020+ Risk Management Tools Vs. Policy Objectives

Objective	Direct tools		Indirect tools			
	Insurance	Mutual funds	Direct payments	Knowledge transfer	Training	Advice
Viable income	+	+	+	+	+	+
Competitiveness	-	-	+	+	+	+
Value chain	-	-	-	-	-	-
Climate change adaptation	+	+	-	+	+	+
Sustainable management of natural resources	-	-	-	+	+	+
Biodiversity	-	-	-	+	+	+
Business	+	+	+	+	+	+
Employment	+	+	+	+	+	-
Health	-	-	-	+	+	+

+ - can have a positive impact; - does not have impact on achieving the objective

Source: Own elaboration

There is room for improvement in terms of increasing complementarity, or even synergy, between targeted risk management instruments and other ex-post payments; for example, by delineating a credible boundary between marketable risks and non-marketable catastrophic risks. There are also further opportunities for Rural Development Programmes (RDPs) to foster cross-cutting priorities, such as knowledge exchange, and support to farm advisory services and producer organisations to address obstacles to the take-up of risk management instruments. For the CAP after 2020, the Mapping study proposes to establish a more constraining framework on the Member States. This framework could, for example, include: (i) the obligation for Member States to design a national “Intervention Logic” integrating the combined effect of all policy measures, (ii) the obligation to set target indicators for all the components of the CAP, including for Pillar I, and (iii) requiring Member States to conduct an impact assessment on both Pillar I and Pillar II elements of the CAP. This should allow for better and more efficient programming without adding complexity

There has been a strong debate on new CAP within the 2021-2027 Multiannual Financial Frameworks (MFF) (European Commission, 2019). As Matthews suggested (2018), “EU priorities such as strengthening the EU external borders, addressing migration and supporting cooperation in defence procurement had to be funded”. European Commission (2020) has declared to spend about 37 billion euro in order to fight SARS-Cov-2 under the Coronavirus Response Investment Initiatives (European Commission, 2020). On 21 April, 2020, a joint roadmap for recovery, dedicated to the EU's response to the coronavirus pandemic was

presented. This means that the CAP budget may be more strongly related to social cohesion in order to ensure achieving goals related to economic recovery of EU MS. According to the European Council and the Council of the European Union (2020), the recovery after the Covid-19 pandemic should focus on “solidarity, cohesion and convergence”. The issues of “the Green transition” and “the Digital transformation” will be underlined in relaunching EU economy. This refers also to the “smart” risk management in agriculture where digital tools are utilised (European Commission, 2019).

5. Conclusion

The HRM seems to be one of the most developed concepts of risk management in the agricultural sector that refer to farmers as actors, instrument and strategies. Currently, HRM incorporates the concept of resilience. Every EU MS supports risk management in agriculture. The most prevalent form of stabilising farmers’ income is ad-hoc compensation in case of catastrophic events. Many countries do also support agricultural insurance schemes. Most of these measures are financed within state aid. However, increasing awareness of growing production and price risk in EU agriculture resulted in changes in CAP. During period 2014-2020 within Pillar 2 MSs can implement three risk management measures. Although the number of MSs using these measures is still relatively low it seems than in future risk management support will become important component of CAP.

Planned CAP reform offers neither new risk management tools nor a holistic approach to risk management. Despite the awareness of the increasing risks related to farming, the EC did not strengthen the capacity of the CAP to support risk management. Yet, it must be underlined that the actions leading to improving training, knowledge transfer and advice can play an important role in increasing the capacity for risk management in agriculture. Thus, the new CAP can have a positive impact on risk management knowledge and skills. Yet, also in the field of knowledge transfer the EC did not propose any new tools so the actual impact of the CAP will depend on the way member states make use of the CAP instruments. The challenges faced by the system of risk management in CAP 2020+ may need a comprehensive approach and extensive actions at various levels of management, taken financial sustainability.

Future research will be focused on assessment of farmers’ preferences for risk management tools taken national strategic plans for CAP 2020+. Furthermore, the issue of trade-off between selected instruments should deeply explored, taken some limitations in public budgets of EU Member States.

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Competitiveness and Innovation of European Union SMEs: a Critical Assessment

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Abstract

Competition is a natural feature of the markets. That is why enterprises choose various measures to support competitiveness and improve company results. In the 21st century, innovation is decisive for market competitiveness and efficiency. The purpose of the article is to assess the competitiveness and innovation of the European Union's small and medium-sized enterprises. The following research question was formulated: Are small and medium-sized enterprises from the EU competitive and innovative? What are their strengths and weaknesses compared to other companies from different regions of the world? As a research method, a literature review, analysis of research results, and reports on the competitiveness and innovation of SMEs in Europe were used. The results show that European SME innovations can rarely be seen as pioneering or groundbreaking. They shape the current reality more often than they relate to the future. The article ends with proposals for further research.

Keywords: competition, competitiveness, European Union, Europe, innovations, SMEs

JEL Classification: F6, O1, O3

1. Introduction

In the global world, competitiveness sees in different contexts. Mostly from a perspective of an enterprise, country, or economic and political union of states, like the EU (Malý 2018). When enterprises are more competitive, this translates into an increase in the well-being of society, the country, and the region of the world.

The 21st century seems to belong to technology. Most modern companies are under pressure from innovation (Fránková 2016). Innovation is an essential driver of economic growth; are beneficial for consumers, entrepreneurs, and the economy. Innovation understood as offering new products or services to clients or a selected group of clients. In the universal sense, change is the development and implementation of new concepts and technologies that increase production efficiency or improve the quality of goods and services. Speaking of organizational innovation pointing to the organization's innovation, we assume that there are few or no competitors (Global ... 2018/2019, pp.26).

Innovation is a crucial element of entrepreneurship and has a positive impact on the economy (Reinganum, 1989; Boer 2001; Low, 2007; Rosenbusch, 2011; Sawang, 2011; Farinha, Ferreira, Nunes, 2018). Innovations in terms of terminology understand as new to recipients (Zaltman, 1973; Damanpour, 1991; Pujari, 2006). Studies have shown that there is a positive relationship between innovation and company performance and financial results (Zahra, 1993;

Weerawardena, Kostopoulos, 2011). It can assume that innovations contribute to better results in many areas in business operations.

The article aims to assess the competitiveness and innovation of small and medium-sized enterprises in the European Union. To achieve the goal, two research questions were asked. First question: Are small and medium-sized enterprises from the EU competitive and innovative? Secondly; What are their strengths and weaknesses compared to companies from other countries? The study used as a research method literature review, analysis of research results, and reports on the competitiveness and innovation of SMEs in Europe and the world.

2. The State of the SME Sector in the EU

Globalization of markets and technological changes intensified those interested in implementing innovations by SMEs. In search of competitive advantage, small and medium enterprises use innovations. The companies that have gained a competitive advantage are most innovative (Ireland, Webb 2007; Urbancova 2013). To increase competitiveness, companies implement innovations and maintain a strong market orientation (Lengnick-Hall, 1992; Low, 2007). Most discussions in the academic literature on entrepreneurship assume that small and medium-sized enterprises should be innovative (Maritz, Donovan 2015). However, it can think that not all enterprises are innovative and have a chance to distance competitors. Simple activities, such as continuous improvement in the modern world, often prove to be insufficient. Innovative breakthroughs are needed (McAdam, 2010). Perhaps it is easier to be an innovator in smaller entities. The activities of these companies are associated with the self-realization of entrepreneurs and their risk-taking. Small and medium-sized enterprises mostly operate on a small scale, show the ability to adapt to changes and market requirements. They can, therefore, be more innovative because of their flexibility (Kuratko, 2001). Less organization complexity and fewer resources facilitate innovation. The SME sector is also characterizing by weaknesses, such as limited access to finance, lack of capital, and low competitiveness. Limited opportunities to invest in innovation constitute a barrier. It can expect that the goal of innovation is the same for every company. However, smaller entities will have more difficulty implementing fundamental innovations.

When examining the state of the SME sector, it is worth paying attention to several vital data. The SME sector is an integral part of the EU economy. That is why the development of competitive small and medium enterprises is of great importance for the process of economic growth. Small and medium-sized enterprises can provide a solid foundation for strengthening existing sectors and the development of new industries. Innovativeness SME is the key to the competitiveness and growth of the European economy (Annual Report ..., 2018/2019). Research & Development and Innovation by SMEs (Annual Report ..., 2018/2019; SME Competitiveness). They affect the population of European enterprises in terms of innovation and competitiveness (Annual Report ..., 2018/2019):

- Small and medium-sized companies dominate the business community in terms of numbers, employment, and income. That is why they are crucial for the EU economy. These entities constitute over 99% of European enterprises and provide two-thirds of jobs in the private sector.
- Small and medium enterprises made a significant contribution to the increase in value-added at the level of 60%. Micro-enterprises generated 28.5% growth, of which small 16.9% and medium-sized 14.1%. Also, in the long term, since 2013, SMEs have made a significant contribution to the increase in value-added.

- The increase in value-added and employment generated by the SME sector in industries where knowledge is not of strategic importance.
- The increase in value-added contributed to the rise in labor productivity.
- Analyzing the results of small and medium-sized companies, they compare with the achievements of companies from various parts of the world. Changes to EU companies are often juxtaposed with Japanese and USA companies. The analyzes draw attention to changes in the number of enterprises, the number of employees, and value-added. EU SME performs better in terms of the increase in the name of enterprises and employment. Value-added generated by EU-28 SMEs increased Japanese companies. American companies have seen a decline.
- The increase in the number of enterprises and employment was higher compared to American and Japanese companies.
- The results of EU SMEs taking into account employment growth and added value concern all member states. This trend occurred for the first time after a long break.
- It is difficult to assess the innovative activity of EU SMEs. There are significant differences in the number of innovative SMEs and the level of innovation in the individual Member States. The percentage of innovative SMEs varies in different countries. The scope of innovation is also different. Companies choose between a broad spectrum of innovations from continuous innovations to breakthrough innovations. These are product, service, and process innovations. They relate to an innovative approach to work organization, human resource management, or decision making. This broadly understood innovation determines the competitiveness of enterprises in the European Union.
- The number of innovative companies varies and fluctuates in individual EU countries. In Romania, the population of innovative SMEs covers about 10%. In turn, in Portugal, the number of innovative enterprises is 66%. In Austria, Belgium, Croatia, Estonia, Greece, France, Hungary, Lithuania, Latvia, Portugal, and the United Kingdom, the number of small and medium-sized innovative entities increased. In the Czech Republic, Germany, Finland, Malta, Romania, Slovakia, Slovenia, Spain, Sweden, Cyprus, the number of innovative companies from the SME sector decreased. The discrepancies between the results of companies from the Member States have different explanations.

3. Assessment of the Competitiveness of Small and Medium-sized Enterprises in the EU

The article looked for answers to the research question: Are small and medium enterprises from the EU innovative and competitive. That is why the programs, policies, and tools used to stimulate innovation of smaller companies were analyzed. This problem seems to be very significant. Competitive pressure is growing. Innovation has become a strategic source of competitive advantage. Due to the dominance in the population of enterprises, the SME sector considered being very important for economic development. However, small and medium-sized enterprises constitute a select group of enterprises. They put hopes for fast and effective development. On the other hand, they require support because of the limited human, organizational, and resource potential. It seems essential to start a discussion on the innovation and competitiveness of small and medium-sized enterprises from member countries.

Many innovations are launch in Europe. However, according to the Global Competitiveness Report developed by the World Economic Forum, the top ten countries in the world only have three eurozone countries. There are significant differences in innovation between enterprises in the EU. There are pioneering companies that are very innovative, and those whose innovations bring little benefits. It seems that diffusion of innovation is not very useful. For some time, there has been a difference in the number of funds allocated to research and development work by the euro area and other major developed economies (Global Competitiveness Report, 2019). In turn, according to the results of the Global Entrepreneurship Research, Europe, compared to other regions of the world, is characterized by a similar level of innovation as the USA and Canada. However, individual European countries differ in innovation. Bulgaria, Poland, and Russia show lower innovation. The level of innovation and the value of TEA (Total Entrepreneurial Activity) are below 15% of entrepreneurs (Global Entrepreneurship, 2018/2019).

In the research on innovation of small and medium-sized enterprises in the EU, it uses the Index of the Innovation Potential of the Member States' SME population. The index covers six selected industries. Another six sectors omitted due to the lack of data for all Member States. High values of this index achieve by countries such as Austria, Germany, Finland, Luxembourg, and Portugal (Annual Report on European SMEs 2018/2019). In the 1990s, the European Commission pointed to the priority importance of innovation in The Innovation Union strategy. The Europe 2020 initiative aimed to increase the innovativeness of enterprises in Europe. Decades ago, it foresaw that adapting companies to changes and new challenges requires building learning organizations that effectively use employee knowledge. The increase in competitiveness of the SME sector in the EU is one of the eleven goals of the cohesion policy in 2014-2020. Small and medium-sized enterprises also receive support under other thematic objectives. These are areas such as research and innovation, a low-carbon economy, information, and communication technology. The European Regional Development Fund (ERDF) has allocated over 65 billion euros to SMEs or around 20% of resources. This support is part of the strategy to support the 'economy that works on people.' Access to investment financing through grants, loans, loan guarantees, venture capital allows valuable contacts with research centers and universities to promote innovation (Annual Report on European SMEs 2018/2019). The Europe 2020 Strategy outlines mutually reinforcing priorities: Smart growth: developing an economy based on knowledge and innovation. Sustainable growth: promoting a resource-efficient, greener, and competitive marketplace. It recognizes that the competitiveness of SMEs should include in the Europe 2020 strategy for smart, sustainable, and inclusive growth (EUROPE 2020).

4. Weaknesses of the EU SME Sector

Global competition is changing. Around 1.2 million enterprises are created in the EU every year. However, only half of the companies can survive the first five years. European companies seem not to be able to keep up with global competitors from other parts of the world. This problem is a policy challenge. It requires building a definite competitive advantage. Stimulating development and innovation is of crucial importance. Investing in R&D should result from the awareness that such actions allow you to maintain a competitive advantage. In turn, it will enable focus on ensuring development. The creation of networks and clusters and the exchange of experience help the SME sector to develop on regional, national, and international markets. Thanks to such assistance, it is possible to create entrepreneurship and build innovative capabilities. Besides, solutions that work in one region can promote in the other areas (European Competitiveness and Industry, 2017).

However, the actions taken so far have not brought the expected results in the field of increasing the innovativeness of small and medium-sized companies. These enterprises, by their nature, have several features that hinder the development and implementation of innovation (Srivastava, 2015). Small and medium companies demonstrate their ability to search for and introduce innovative solutions.

Difficulties in implementing innovations result from the following weaknesses for small and medium-sized enterprises:

- very high financial risk;
- limited possibilities to maintain your research laboratory;
- high risk of undertaking innovative activities
- lack of adequately educated specialists in the area of organization, technology, and technology;
- difficulties in conducting formalized research on a large (profitable scale)
- lack of time and financial resources for patent protection.

The assessment of the innovativeness of the EU SME sector depends on the adopted criterion. It is crucial whether the evaluation covers the introduction of new products/services. Modifications of the products and services offered so far are not enough. The low technical and technological competitiveness of small and medium-sized enterprises, the lack of highly qualified staff, lack of funds for research and development determine the weakness of these entities. Their material and human resources limit the innovation of these companies.

5. Conclusion

It is necessary to focus the attention of researchers and business practitioners on increasing the competitiveness of SMEs from the EU. The quantitative dominance of these entities should not prejudice their contribution. Research on building competitive advantage for SMEs from the perspective of future economic, social, and environmental challenges is rarely carried out in the EU. The data presented in the reports are not current, and the studies are not cyclical, repetitive. In the EU SME sector research, quantitative methods are most often used to compare current statistical data to those of previous years. Qualitative research on a large scale is much less frequently carried out. The implementation of qualitative research can help you understand the problems of innovation and competitiveness of small and medium-sized companies from the EU. The methods and tools used so far to stimulate innovation and strengthen competitive advantage prove to be insufficient. SME innovations from the EU area are more often additional competencies that increase operational efficiency. Many recommendations and programs related to improving the competitiveness of SMEs in the EU. EU small and medium-sized enterprises need top-down assistance. For example, in the form of tax breaks, readily

available loans, numerous subsidies, procedural facilitation for investments, and support in filling the shortages of qualified employees. But the most prominent and proven solution is to strengthen the close cooperation of enterprises with universities and research institutes. Also, innovation education and training programs are essential for European SME (Melas 2018). This model for enhancing competitiveness proved useful in the USA and Japan.

Setting the direction for further research, one should focus on indicating new methods of overcoming restrictions in building the potential of innovation and competitiveness of the SME sector. A new research problem is the promotion of good practices of smaller entities in the field of innovation and competitiveness. The successes of companies from other parts of the world are better known than the small and medium-sized businesses innovations from Europe. It is worth developing research in the new area of greening (Rutkowska, Sulich, Pakulska 2018), sustainable entrepreneurship, micromanufacturing, community and social development, disaster recovery, crisis communications, facilities management, environmental interactions for stimulating development. They constitute new areas of activity for small and medium enterprises.

There is a lack of a unique view on the SME sector ahead of global changes. Currently, enterprises are developing in an era of substantial global problems. These threats result from human attempts to dominate the environment, rapid climate change, new dangers such as COVID 19, the strong economic dependence of the world on China. The European SME sector, reaching into the "heart of entrepreneurship," which is innovation and change, has the opportunity to treat threats as development opportunities conducive to increasing competitiveness. The use of creativity, green innovations, implementation of the idea of sustainable entrepreneurship assume a look into the past and the creation of new business solutions. Then we can assess the potential of the SME sector in the EU from the perspective of the future, not current challenges.

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A Concise History of Brexit - What Lessons for Europe?

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Abstract

Although the Brexit process has for a long time been much slower than expected by British voters, with Boris Johnson entering the scene the situation has fundamentally changed: the process has been accelerated and deadlines have been shortened. The narrative is also changing: Brexit itself is no longer necessarily bound to lead the United Kingdom to a catastrophic economic downturn, and not even a relatively peaceful exit can be ruled out. In such a scenario, Member States in a similar position to the British – especially France and Italy, being large net contributors, but also less able than Germany to reap the benefits the EU periphery can provide in the form of either (cheap) labour or markets – may tend to reconsider their situation within the integration. This paper, by presenting the background of and the path to the referendum, as well as the changes in the dynamics of the exit negotiations, could provide lessons for the remaining countries.

Keywords: Brexit, disintegration, EU budget, EU policies, integration

JEL Classification: F02, F13, F15

1. Introduction

The result of the Brexit referendum has puzzled most analysts. Those who are uncomfortable with criticizing the European Union tend to place the UK-EU relationship in a historical perspective arguing that the British have never been committed to the European project. Hence, it was better for the UK to quit rather than stay on and hinder the other member states in their efforts to deepen and complete the integration. Conversely, critics of the EU and true Eurosceptic Brexit believers (Brexiters) ascribe the outcome of the referendum and the subsequent exit to very specific reasons (i.e. disadvantages of the UK membership), and believe that when Britain is exiting the EU, she is leaving a 'sinking ship'. In our analysis, we try to find the golden mean, in the hope of getting closer to truly understanding the reality.

In our efforts to capture reality, and by putting the issue into historical perspective, we have set ourselves the following goals: to track the changing attitude of the British towards the European integration; identify the factors (both domestic and EU-related) paving the way for the referendum; interpret the results of the vote and the various narratives associated with them; guide the reader through the main stages of the Brexit negotiations by shedding light on their background.

In order to achieve the above goals, we have tried to learn as much as possible from the literature on disintegration, Brexit, and the British EU policy available both in libraries and online, from international conference proceedings (including those of ICEI 2016 and 2018), and from video recordings of the hearings and committee meetings in the British Parliament.

2. History

For a country that, in the 1870s, used to be the world's largest economy, had greater naval power than the other countries combined, and directly controlled a fifth of the Earth's surface, it was normal to be struggling to find its post-imperial role while having gradually been losing nearly all of its overseas possessions, and declining in terms of per capita output and income to be on par with Italy by a hundred years later (Reynolds 2013, p. 1).

To say the least, the British-EU relationship has always been problematic. Due to their history and legal system, so much different from those of the Continent, and based on a specific understanding of national sovereignty, the British have developed a pragmatic and instrumental approach towards Europe – see e.g. their being a driving force for completing the single market, promoting trade policy or the EU enlargement in 2004 (Ronek 2013). They have always seen the integration as an opportunity for economic and commercial cooperation, rather than an ever deeper political project.

2.1 Difficult Beginnings

For about a decade after 1945, their economy was still too strong for the British to let easily go of the imperial past. A closer cooperation with the Continent was feared as something that could undermine the UK's special financial position in the Sterling Area, as well as her trading positions in former colonies. A customs union was seen as a first but irreversible move towards full economic integration with Europe, foreshadowing the erosion of the UK's leading role as a world trading power. Although concepts and theories had been developed whereby people of post-war Western Europe were to be united under British leadership, such plans failed over the then prevailing economic policy paradigm to keep control over tariffs on imports from, and more generally, over trade with the Commonwealth countries, as well as to promote agreement on a freer world trade (Young, 1993).

However, the balance of power was rapidly changing. The signing of the Treaty of Rome (in March 1957) and much faster economic growth achieved in members of the European Economic Community (EEC) than in the UK revealed that, contrary to British expectations, nations of continental Europe were able to commit themselves to long-term economic integration without help or participation from Britain. London feared that the EEC would soon to become more influential and therefore a more valuable partner in the eyes of Washington than the United Kingdom. Hence, some form of British association with the Community was deemed essential (Reynolds, 2013).

By the early 1960s, the British realized it was in their interest to enter the Common Market, but the double French veto (in 1963 and 1967) prevented them from doing so for years. By the time the UK eventually joined the EEC in 1973, its main institutions and common policies (e.g. the commercial and agricultural policies) had already been established by the founding members, with complete disregard for British interests. Worst of all was that Britain entered the integration when the best years of the latter were coming to an end: when *“persistent inflation, strike action and low growth began to dog all Western economies ending the expansion of the 1950s and 1960s.”* (Young 1993, p. 117). In short, the UK's early membership was *“associated with economic dislocation and recession rather than growth”* (Ronek 2013, p. 240). Not to mention the legal consequences of accession, i.e. that by signing the Treaty of Accession and then passing the parliamentary vote on it, the UK accepted the primacy of EU law. This, however, was in conflict with the principle of parliamentary sovereignty, the most important part of the UK constitution (Parliament.uk 2020).

2.2 Path to the Referendum

To question the usefulness of being in the integration dates back to the very beginning of the UK membership. On 5 June 1975, within less than two and a half years following accession, the then new Labour cabinet – after having successfully renegotiated some aspects of the British terms of entry (e.g. the introduction of the Community's regional policy, a budgetary correction mechanism and market access for New Zealand dairy products) – organised a referendum on whether the UK should stay or leave. On the ballot paper, the question was so worded (i.e. by emphasising the economic (market) nature of the integration) as to encourage a yes vote for pragmatic Britons: “*Do you think the United Kingdom should stay in the European Community (the Common Market)?*” (Watts & Pilkington 2005, p. 227; Parliament.uk 2015). No wonder, the Remain won by 67 percent. Obviously, it would have been different, if the first sentence of the Treaty of Rome referring to “*an ever-closer union among the peoples of Europe*” had been used.

In addition to the continued dissatisfaction with the common agricultural and budgetary policies, the problematic nature of the British membership can also be seen in the fact the UK being the member state with the most exemptions in the EU (e.g. Eurozone, Schengen, justice and home affairs cooperation, or the rebate). Similarly, London was not a signatory to policies strengthening European economic governance like the Fiscal Pact, or agreements on the European stability mechanism, or a key element of Europe's banking union, the Single Resolution Mechanism. All these dissatisfactions and opt-outs – in short, the lack of clearly articulated British EU policy – can be ascribed to three main factors: the overemphasis of the economic benefits at the time of accession which implies that less had been said about political and sovereignty-related consequences; the historical fixation with sovereignty (combined with the adversarial and electoral systems) resulting in deep divisions on the European question within the main political parties; and London's inability to play by the EU rules of games, i.e. the constant search for occasional allies which gives greater room for manoeuvre to reach the ultimate political goals (Forster 1999).

In the late 1980s and early 1990s, further important nails were placed in the coffin of British membership of the European integration. First, the Factortame Case (decided from March 1989 to November 2000), by giving courts power to restrain while pending trial, and ultimately disobey an Act of Parliament when it was found to be contrary to EU law, helped politicians in the UK fully grasp the power of EU law over parliament. Second, the reunification in 1990 foreshadowed the image of a far too strong German economy, and the breakdown of the balance of power between Paris and Berlin. We consider it right to state that the fate of Europe is largely dependent on Berlin's engagement. To the extent that Germany tries to assert its influence over EU policy, resentments against the country may increase in the other member states (Webber 2014), like in the UK where a significant part of the elite viscerally rejects “being bossed by” Germans dominating the integration (Lawson 1990). Finally, the Maastricht negotiations, culminating in signing of the Maastricht Treaty in 1992, and the ratification process which lasted until mid-1993 in the UK, did, in spite of the negotiated opt-out from the third phase of the Economic and Monetary Union (EMU), exacerbate the cleavage between the two wings of the ruling Conservative Party: Eurosceptics, worrying about allowing other member states to move towards the monetary union, and Europhiles, wanting to participate in it. The dissension within the party was so sharp that it took over a year for the Maastricht Bill to be ratified, and it only passed when the government made it a confidence issue (Forster 1999, pp. 63, 182).

For the next more than a decade and a half, skepticism seemed to be waning in UK's European policy, mainly due to the ascension to government of the New Labour under the leadership of

Tony Blair and Gordon Brown. Their governments have made significant concessions to the EU in a number of areas: from 2004 on, they allowed unrestricted access for workers from the new Member States; waived a substantial part of the rebate (€10.5 bn) at the December 2005 summit, closing the multiannual financial framework (MFF 2007-13) negotiations, so as to take due share in the burden of Eastern Enlargement (European Council 2005); and even flirted with the introduction of Euro (see to so-called *five tests*, the criteria defined by the Treasury under Gordon to be used to assess the UK's readiness to join the EMU).

The effect of partial renouncement on the rebate began to be manifest from 2010 onward, the UK becoming the second most important net contributor to the EU budget. Net migration into Britain, intensified (first by the arrival of Poles, and then Romanians) until reaching an all-time record level of 342,000 in 2015. This sort of mass immigration (mostly) into low and medium-skilled work has been a significant fiscal cost for the UK, and this is without even taking into account the other negative effects like overcrowding, increasing waiting lists (for certain types of e.g. public hospital care), and congestion (Migration Watch UK 2019). On the top of all this came the Eurozone crisis, with non-systemic steps taken to save southern banking sector at the expense of northern taxpayers, pressure on narrower monetary and fiscal integration, and economic harmonization possibly leading to gradual federalization of Europe, all of them being utterly unimaginable for the British (Kučerová 2018, p. 870). The above phenomena, combined with the general bad mood caused by the prolonged austerity policy since the onset of the global financial crisis, once more contributed to strengthening, by mid-2010s, the old British Euroscepticism in both the country and within the ruling Conservative Party. Successes of the UK Independence Party (UKIP) at the 2013 local elections (third place), and particularly at the 2014 European elections – the first time a political party other than Labour or Conservative had won a popular vote since 1906 – played a significant role in launching the 2016 EU referendum.

2.3 Results, Analyses, Narratives

The idea of holding an in-out referendum about the UK's membership in the EU was first mentioned on 23 January 2013 in a speech at Bloomberg made by then Prime Minister David Cameron. Two years later, the promise was confirmed in the Conservative Party manifesto for the 2015 general election, and linked to another one, a new arrangement for the UK in the EU to be negotiated before the referendum. But the negotiations, which took place at the end of 2015 and early 2016, resulted in very limited changes in the UK's status, partly due to only reaffirming the validity of some already existing opt-outs, partly due to the temporary nature of the new ones – e.g. restrictions on access to the British welfare system for new EU migrants (HM Government 2016). While, according to the Electoral Commission, rival Remain and Leave campaigners raised similar sum of money (as there were stringent spending limits established), the government did not leave the referendum's outcome to chance and spent over £9 million to deliver leaflets to every household in the UK, setting out the case for remaining in the EU (BBC 2016a).

On 23 June 2016, to the question posed to the electorate: “*Should the United Kingdom remain a member of the European Union or leave the European Union?*” 51.9% of the voters responded negatively. Out of the four regions making up the United Kingdom, people of England and Wales chose to leave, while those in Scotland and Northern Ireland voted to stay in the EU. Without going deep into the details, there are three phenomena worth mentioning in the context of the referendum. First, as no comprehensive exit poll was conducted by big broadcasters, conclusions whereby rural, elderly and non-skilled voters were to blame for Brexit, lack any scientific basis. However, there are more sophisticated estimates, too. One of

them, for example, find that in areas with historical dependence on manufacturing, as well as deprivation in terms of education, income and employment were more likely to vote Leave. It is also stated that a higher turnout of young adults, allegedly more likely to vote Remain, would not have overturned the result (Becker et al. 2017).

Second, lots of the studies on the economic consequences of Brexit, including those published by the Treasury, predict very dark future for the British economy. However, this is often due to incorrect method, or the extremely conservative assumptions put into the econometric models concerning the effects of new free trade agreements on the UK GDP (Minford 2019). Third, the standard narratives, developed on Brexit, are deceptive: to call it soft or hard is misleading. The only sensible option is a clean Brexit, meaning to leave the single market and the customs union, and regain control over borders (immigration), money (budgetary contribution) and laws. Any other option leads to a messy Brexit whereby the UK remains tied to decisions in which she would have no say any more (Halligan & Lyons 2018, pp. 19-22).

3. Negotiations

On the day following the referendum, when the results became known, Cameron announced his resignation, but stayed in office until the new leader, Theresa May who had campaigned to remain, took over as prime minister on 13 July 2016. Soon, it is suggested that the UK would relinquish the Council presidency, scheduled for the second half of 2017. The first weeks are spent setting up two new ministries, Departments for exiting the European Union (DExEU) and for international trade (DIT), and providing them with the necessary staff. Round tables with key stakeholders in a series of sectors also begin. In early December, a vote in the Commons on respecting the outcome of the referendum is passed by a 6 to 1 majority.

The UK's strategy for exit is ready by the beginning of 2017, first revealed in May's so-called Lancaster House speech on 17 January, and then published as the government's White Paper on 2 February. The plan includes 12 priorities, of which strengthening the Union (the UK), protecting historic ties with Ireland, as well as the rights for both citizens and workers, controlling immigration, ensuring free trade with the EU, securing trade agreements with third countries, and remaining the best place for science and innovation. On 29 March 2017, the Prime Minister's letter about the UK's intention to leave the EU is handed over to European Council President Donald Tusk, thus triggering the negotiation process under Article 50.

Negotiations between the UK and the EU starts on 19 June 2017, only after that the early general election, initiated to give the Conservative government a stronger mandate to negotiate their Brexit strategy, results in a hung parliament. Conservative minority government is upheld by receiving the backing (i.e. a confidence-and-supply support) from the Democratic Unionist Party (DUP), a small party in Northern Ireland favouring British identity. Negotiating rounds, initially organised once every 4 weeks, consist of plenary sessions and negotiating group meetings. Negotiating groups have been established on citizen's right, financial settlements and other separation issues. In addition a dialogue on Ireland/Northern Ireland has been launched. On 22 September 2017, in her so-called Florence speech, the possibility of a transition period after the UK formally leaves the EU appears. In early December 2017, the negotiating parties publish a Joint Report on progress during Phase 1. This concludes Phase 1 of the negotiations, and the UK and the EU agree to move to talks on transition and the framework for future relations in Phase 2 from January 2018 on.

In late February 2018, the Commission publishes the Draft Withdrawal Agreement which translates into legal terms the Joint Report. On 19 March, an amended version is published which includes agreed legal text for the implementation (i.e. transition) period, citizens' rights,

and the financial settlement, as well as a significant number of other articles on separation issues. Certain topics, however, in particular that of the Irish border and the dispute settlement mechanism, have not yet been resolved.

On 26 June 2018, the European Union (Withdrawal) Bill, commonly referred to as the 'Great Repeal Bill' becomes law. The Act which came fully into force on Friday 31 January 2020, repeals the 1972 European Communities Act, provides legal continuity by the transposition of directly-applicable already-existing EU law into UK law, and so creates a new category of domestic law for the UK: retained EU law. Also, it creates the powers for parliament to make secondary legislation. Once EU law has been converted into domestic law, parliament will be able to pass legislation to amend, repeal or improve any piece of EU law that are no longer relevant (Palkovská 2018, p. 283).

On 6 July 2018, the May government meets at Chequers to agree a collective position on the future relationship for the upcoming negotiations with the EU, to be published as a White Paper a week later. On 8 July, Brexit Secretary David Davis resigns, followed shortly by Boris Johnson, the then Foreign Secretary, and several other ministers. The main reason behind is that the government document makes too many concessions to the EU on trade in products – especially it commits to ongoing harmonisation with EU rules on goods, state aids, and Customs Code, also implying the Court of Justice of the EU (CJEU) to be the final arbiter in disputes over the interpretation of EU law – while it contents itself with a lower-than-earlier level of market access for services. In mid-November, the UK and the EU reach an agreement in principle on the Withdrawal Agreement, establishing the terms of the UK's departure on 29 March 2019, after which Brexit Secretary Dominic Raab, and several other ministers resign. A difficult period begins when, based on the Attorney General's successive legal advices on the so-called Irish backstop – an insurance policy which would be triggered if the UK and the EU fail to agree a deal on future trade by the end of the transition period and could trap the UK in the EU's customs union indefinitely – the Commons rejects three times (on 15 January, 12 and 29 March 2019) the withdrawal treaty negotiated by Prime Minister Theresa May. The UK's exit date is postponed several times. As a consequence, the UK must take part in the elections to the European Parliament on 23-26 May 2019, in which the newly-established Brexit Party came first, winning 31.6% of the popular vote, three and a half times more than the Conservative Party (BBC 2019). In order to save the latter from collapse due to their incompetence over Brexit, Boris Johnson replaces Theresa May as Prime Minister on 24 July 2019. Although his new pro-Brexit team is able to renegotiate the Withdrawal Treaty, successfully modify the Irish Protocol, and also improve the wording of the Political Declaration (the other part of the Brexit package dealing with future relationship between the UK and the EU), in the extremely divided, indecisive Commons it is impossible to ratify the negotiated documents. It only becomes possible, when the General Election of 12 December 2019 results in a comfortable Conservative Party majority. Finally, on 31 January 2020, the United Kingdom formally ends its membership in the European Union.

4. Conclusion

The structure of the negotiations, the selection of topics to be first discussed, the building of narratives that media could then pick up and disseminate, the Commission's inflexibility to make concessions to the May government, the incorporation of the Irish question into the debate, all this have contributed to the fact that criticisms about the European Union proved to be justified in the eye of a significant part of the British society, ever more determined to quit. Against this background, the future of the EU depends to a large extent on the ability to draw the right lessons from the Brexit process and find the best ways forward.

The first and most important lesson is that the UK's EU membership has been problematic from the very start. Due to delayed accession, the British interests could not appear in the shaping of the basic structure (institutions, policies) of the European cooperation. Moreover, since the reunification of Germany, those features of the integration that had once made it attractive to the British (free trade, common market) have been fading away, and the EU has gradually developed into being more of a political project.

In addition, it was a mistake on the part of the British (notably the Conservative Party), in the aftermath of the referendum, to nominate and elect as prime minister a Remainer (Theresa May) – i.e. somebody who had campaigned to remain in the EU –, whose poor negotiating strategy led to mass resignations of ministers and record government defeats in parliamentary votes. The withdrawal process took a positive turn only after the advent of Boris Johnson as Prime Minister, respecting the referendum results, believing in Brexit, and acting accordingly.

Finally, it was a mistake on the part of the EU to exploit (and even exacerbate) the weakness of the May government – not only by repeatedly humiliating the Prime Minister, but more importantly, by trying to impose absolutely unacceptable terms on the UK on the basis of the principle of "no cherry picking".

The above lessons also define the direction for further research. The Brexit process did not end on 31 January 2020. On the next day, the transition period during which the UK is to negotiate a future relationship with the EU began. As it stands today, it is due to run until the end of 2020. Keeping track of and monitoring these negotiations may reveal if the parties have learnt from the mistakes of the withdrawal process. Brexit is no longer about whether it is worth leaving the EU, but about restoring democracy. For the sake of both the UK and the EU, the best would be to compromise on a real, mutually advantageous future trade deal.

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Is the Position of Emerging Economies Comparable to the Western Powers in Global Context? Mapping of Competitive Relations

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Abstract

Competitiveness and performance importantly affecting the world trade and international relations, especially nowadays, given the changing position of the world leaders and growth of new economic powers. Global trade patterns are changing rapidly. Led by China and India, emerging economies are increasing the share of gross domestic product and exports in the global economy and intensifying competition in nearly all sectors. It creates new threats and challenges for all players in the world economy, and increasing competitiveness must be optimally efficient. This paper employs the Data Envelopment Analysis in the form of the Malmquist Productivity Index for comparing productivity level and efficiency changes of the World Trade Organization members. Applicability of this approach illustrates a real data set involving 137 countries within the factors of competitiveness based on the World Economic Forum stated in the Global Competitiveness Index in reference period 2007-2018, i.e. pre-in-post crisis. Differences in the overall productivity demonstrate that countries are at very different levels regarding competitive advantages and stages of development. Therefore no one-size-fits-all blueprint exists for improving competitiveness.

Keywords: competitiveness, DEA, EU, MPI, stage of economic development, WEF, WTO

JEL Classification: C67, E60, F62, O47

1. Introduction

It is widely and globally accepted that the stage of economic development is not uniform and balanced across territories (can be seen in the perspective of countries, regions, counties or cities). On the contrary, it significantly and ambiguously differs. Human actions are related to economic development and influenced by the level of territorial development, the ways and means of measurement, as well as evaluation of the conditions of national development, is essential in the determination and orientation of national socio-economic policies. The issue of socio-economic advancement, as well as differences among and of territories, is closely interrelated to the setting and arrangement of competitiveness. The economy's access into the globalisation phase, or maybe better into the phase of continual globalisation of the economy, radically and rapidly altered, transformed and adopted the nature of competition. Globalisation obliged all territories or economic entities to raise their standards and conditions of economic efficiency, resulting in a growing interest in and concern about competitiveness. Territories and as well as economic entities have no other option but to strive to be competitive in order to survive in the new global marketplace and to compete to the "new competition" being forged by further information-driven or knowledge-based economy (Gardiner et al., 2004); nowadays as well as by "relatively new competitors" to the traditional western hegemons (post-war triad of Europe, Japan and United States) in the form of emerging economies, especially BRICS countries leading by China.

Policy-makers at all institutional or territorial levels are necessarily drawn in this competitiveness “battle” and fever. The increasing interest and attention to competitiveness issues may perhaps be partly attributable by the matter of fact that all economies were having to contend with growing standards and conditions of economic (but not only economic) efficiency and effectiveness as a result of the globalisation processes. Such developments and changes have, in turn, resulted in the new rules and conditions of the game in business, internal and sectoral markets and international trade. Some researchers have considered competitiveness as a crucial assumption of success in economic performance in broader comparison (OECD, 1992). Other authors have regarded competitiveness as a misplaced and inadequate concept and a useless and unfounded obsession (Krugman, 1994). The orthodox theoretical framework of competitiveness concept is the pure neoclassical theory of static comparative cost advantage (based on the theory of David Ricardo), which is the philosophical, conceptual and ideological background of the Washington Consensus.

Macroeconomic competitiveness of individual countries is considered by national governments to be essential policy targets and, at the same time, for issues that need to be solved. For some years, government or policy targets have been set to increasing macroeconomic performance and creating new advantages to minimise the gap between less and more productive ones. Nowadays, nations have to deal with pressures on the state budget and public balances, the enhancement of efficiency and effectiveness of federal spending high on the political agenda (Halásková and Halásková, 2014; Pakšiová, 2017). Information in the form of statistical evidence based on real data can help to understand the routes to economic growth and lead to better policy. The article uses the Data Envelopment Analysis (DEA) to obtain practical applications for the economic system, i.e. at the macroeconomic level.

The paper aims to propose a DEA application to evaluate efficiency changes and to analyse a level of productivity depending on each country's stage of development. DEA applies Output-Oriented Malmquist Productivity (OO MPI). The calculations verify the sample of 137 World Trade Organization (WTO) members in the reference period 2007-2018 (including all the years inside this range). Variables of inputs and outputs are the factors of competitiveness presented in the Global Competitiveness Index (GCI), which is part of the Global Competitiveness Reports (GCR) published by the World Economic Forum (WEF) every year. The article follows the structure: chapter 2 briefly introduces the relationship between concepts of competitiveness and performance; chapter 3 briefly presents the history and background of the DEA methodology with particular attention to the MPI approach; chapter 4 describes indicators and data source, national coverage and reference period; as well as discusses the main results. The last chapter summarises the conclusions.

2. Theoretical Background

Substantial aspect for understanding competitiveness is a level at which this concept is defined; standardly, the micro and macro level differ as well as in the context of regional issues (MacGregor Pelikánová, 2019; Sucháček, 2016; Šotkovský, 2016; Viturka, 2016). The problematic in understanding competitiveness leads to difficulties in its evaluation (Poledníková, 2013; Žitek and Klímová, 2015; Zizka, 2011). Many institutions monitor macroeconomic competitiveness – two well-known organisations publish the most reputable reports – the Institute for Management Development (IMD) and early mentioned the World Economic Forum. For comparing macroeconomic competitiveness in the article, the meaning and subsequently database of WEF are employed for two reasons. Firstly, due to the long-term continuity – WEF publishes GCR/GCI since 1979. Secondly, due to the suitability of the applied mathematical approach.

WEF (2018) defines competitiveness as the set of factors determining the level of sustainable productivity of an economy (country, region, city). In WEF's definition of competitiveness is a relevant term – productivity. Many authors, with Krugman (1996) and Porter (1990) in the first line among the others, agree to combine competitiveness and productivity. The primary goal of a country is thus the production of high and rising living standards for its inhabitants based on the productivity of using a nation's resources. The concept of competitiveness is thus linked to productivity, usually based on Porter's approach (Porter, 1990). Competitiveness is observed characteristic of economies appearing in measuring performance as a whole. The definition of macroeconomic competitiveness emerged with the globalisation process in the world economy as a result of growing competition among participating subjects. Governments set policy objectives not only to increase macroeconomic productivity against other competitors but also to create new assumptions to minimise the competitive gap towards more productive countries. Competitiveness taxonomy provides a framework for action of countries that wish to improve their competitiveness. However, do all states have the same opportunities regarding competitiveness? Based on GCR, states face different situations and assumptions during the move on the developing path from the resource-based to the knowledge-based stage. Based on Porter's respected approach (1990, pp. 555-565), following stages of economic development and their driving forces are differentiated: 1) Factor–Driven phase (endowments of labour and natural resources); 2) Investment–Driven phase (efficiency in producing standard products and services), and 3) Innovation–Driven phase (the ability to create innovative products and services using the most advanced methods).

Using interconnections between competitiveness – productivity and WEF's meaning of competitiveness, it's possible to decide on a quantitative method to competitiveness assessing. A suitable tool to productivity measurement can be DEA that evaluate multiple factors determining productivity. Variables employed in the empirical analysis are chosen based on the WTO approach to competitiveness, i.e. in the form of GCI, which has many dimensions. DEA is also suitable concerning the link to the main aim of competitiveness and the link to performance and its two parts – efficiency and effectiveness. Efficiency compares the input/output ratio. Effectiveness compares the output/outcome ratio, and the outcome is linked with welfare concept what makes effectiveness more challenging due to the political choice.

Finally, three key topics (competitiveness – productivity – stage of development) are essential for the paper concept, as follows: 1) the relationship between concepts of competitiveness – productivity (Michael Porter's approach); 2) the relationship between theories of competitiveness (competitive advantages) and stage of development (Michael Porter's approach); 3) the relationship between WEF's approach to competitiveness evaluation and using stage of development concept; 4) the relationship between WEF's approach to competitiveness evaluation and understanding of competitiveness through productivity; and 5) the relationship between DEA method and its suitability to productivity evaluation.

3. Methodology

Assessment of performance presents a controversial topic enjoying interest among researchers, policymakers and practitioners. The first study focused on specific measures of productivity and failed in combining the measurements of multiple inputs into an adequate means of efficiency, i.e. in the form of efficiency index in which a weighted average of the inputs is compared with the outputs. Responding to these inadequacies, Farrell (1957) investigated the question of how to measure efficiency and highlighted its relevance for economic policymakers. Twenty years after Farrell's model and building on those ideas, Charnes et al. (1978) introduced the Data Envelopment Analysis (DEA) method in the form of CCR model

with constant returns to scale (CRS), and in 1984 modified by Banker, Charnes, Cooper (Banker et al., 1984), in the form of BCC model with variable returns to scale (VRS). Since then, DEA has been the subject of further development in the way of advanced additive models. DEA provides a relative efficiency evaluation of decision-making units (DMUs). DEA is suitable to determine the efficiency score of DMUs that are mutually comparable – converting multiple inputs into multiple outputs with different efficiency. DEA categorises DMUs into two exclusive sets: efficient and inefficient. DMU is recognised as efficient in the case if the monitored data coincide with the imaginary production possibility frontier.

Recently, interest has oriented on the causes of productivity and its change. The Malmquist Productivity Index (MPI) has become a useful tool in productivity measurement, considering the time factor, i.e. to measure productivity between two periods, t and $t+1$. Färe et al. (1994 a/b) defined and applied an input-oriented productivity index as the geometric mean of the two MPIs developed by Caves et al. (1982). MPI is the result of two effects. The catch-up effect shows the degree to which a DMU improves or worsens its efficiency – technical efficiency change. The frontier-shift effect presents a change in efficient frontiers between two periods – technological efficiency change. Respecting linkages between competitiveness and orientation of policy-makers, output orientation of model is employees – OO MPI defined via (1):

$$MPI_q(x_q^{t+1}, y_q^{t+1}, x_q^t, y_q^t) = E_q \cdot P_q, \quad (1)$$

x_q – inputs, y_q – outputs of evaluated DMU_q in t and $t+1$; E_q – technical efficiency change (ECH) between period t and $t+1$; P_q – technology frontier shift (FS) between period t and $t+1$. Components E_q and P_q are formulated via (2) and (3) (Färe et al., 2011, pp. 138-141):

$$E_q = \frac{\phi_q^{t+1}(x_q^{t+1}, y_q^{t+1})}{\phi_q^t(x_q^t, y_q^t)}, \quad (2)$$

$$P_q = \left[\frac{\phi_q^t(x_q^{t+1}, y_q^{t+1})}{\phi_q^{t+1}(x_q^{t+1}, y_q^{t+1})} \cdot \frac{\phi_q^t(x_q^t, y_q^t)}{\phi_q^{t+1}(x_q^t, y_q^t)} \right]^{\frac{1}{2}}, \quad (3)$$

the optimum value of variable ϕ_q expresses the need for a proportional increase of outputs to achieve DMU_q efficiency in time t and $t+1$ corresponding to inputs x_q and outputs y_q of the given period. By modification of formulations (2) and (3), formulation (4) allows to measure ECH and FS of a specific DMU_q between period t and $t+1$ (Färe et al., 2011, pp. 138-141):

$$MPI_q = \frac{\phi_q^{t+1}(x_q^{t+1}, y_q^{t+1})}{\phi_q^t(x_q^t, y_q^t)} \left[\frac{\phi_q^t(x_q^{t+1}, y_q^{t+1})}{\phi_q^{t+1}(x_q^{t+1}, y_q^{t+1})} \cdot \frac{\phi_q^t(x_q^t, y_q^t)}{\phi_q^{t+1}(x_q^t, y_q^t)} \right]^{\frac{1}{2}} = ECH_q \cdot FS_q. \quad (4)$$

$MPI_q < 1$ indicates a decrease in productivity of DMU_o from Period 1 to Period 2, $MPI_q = 1$ remains unchanged in productivity and $MPI_q > 1$ means an increase in productivity.

However, the DEA faces a significant limitation – to obtain relevant results, the number of DMUs have to be at least twice higher than the total number of input and output variables. Practically, if the number of measures (input/output) is high in comparison with the number of DMUs, then most of the DMUs result in an efficient score. Hence, the results are not realistic. The rule of thumb expresses the relation between the number of DMUs and the number of performance measures sufficient for DEA, as follows in the formulation (5) and its simplification (6) – n DMUs consume m inputs to produce s outputs (Cooper et al., 2004):

$$n \geq \max \{m \times s, 3(m + s)\}, \quad (5)$$

$$n \geq 3(m + s). \quad (6)$$

Original data set involves 137 WTO members (for each of the six inputs and six outputs) to validate the proposed approach. The rule of thumb fulfilled all the cases of DEA empirical analysis as follows: 1) 137 WTO members: $137 \geq 3 (6 + 6)$, $137 \geq 3 (12)$, $137 \geq 36$; 2) 56 WTO members: $56 \geq 3 (6 + 6)$, $56 \geq 3 (12)$, $56 \geq 36$; 3) 45 WTO members: $45 \geq 3 (6 + 6)$, $45 \geq 3 (12)$, $45 \geq 36$; and 4) 36 WTO members: $36 \geq 3 (6 + 6)$, $36 \geq 3 (12)$, $36 \geq 36$.

4. Problem Solution

Since its inception, DEA has become important and widely used means in many types of research and analysis with a different sectoral and territorial focus including applications to the EU countries (see, e.g. Melecký, 2018 or Hančlová and Melecký, 2016). Such studies have a similar context and research question focusing on the fundamentals of competitiveness and determining comparative and competitive advantages with respect to the evaluated territory.

4.1 Composition and Empirical Background

In the paper, research is interested in determining efficiency among various DMUs (i.e. 137 countries) within the WTO group. Essentially, the DEA approach determines the productivity of each state by comparing its productivity with others in the group of WTO members, i.e. territorial aspects of empirical analysis. WTO consists of 164 members since 29 July 2016 (WTO, 2016), but not all of these countries are part of the empirical analysis because of data non-availability concerning selected approach for a database of indicators, i.e. WEF. Individual GCI pillars affect different countries differently – this is based on the economic theory of stages of development and Michael Porter approach specified earlier. The territorial aspect of the study is thus dedicated to 137 countries divided into three groups as proxies by its GDP per capita and the share of exports represented by raw materials, as settled WEF (2018). It is worth recalling that in the article – to meet the rule of thumb – only the main stages of development are applied without two transition stages. Classification of states into categories based on stage of development is as follows (WEF, 2018): 1) Factor–Driven stage (56 states): GDP per capita (USD) threshold < 2.999 ; 2) Efficiency–Driven stage (45 states): GDP per capita (USD) threshold $3.000-17.000$; and 3) Innovation–Driven stage (36 states): GDP per capita (USD) threshold > 17.000 .

Indicators, in the form of 12 GCI, present fundament for the evaluation of productivity among WTO members by DEA approach. GCI pillars show input and output size of indicators. Indicators come from WEF's database published within GCR in period 2007-2018. GCI pillars are associated based on the various input and output aspects of national competitiveness they characterise, while inputs describe driving forces of competitiveness, and outputs represent direct or indirect outcomes of the competitive activities of the economy. The GCI pillars matter to some extent for all economies; it is evident that they affect different economies in different ways what confirms the importance of application of different stage of the development concept (WEF, 2018). Input indicators (II) represent following six pillars – Institutions (II1), Infrastructure (II2), Macroeconomic environment (II3), Health and primary education (II4), Higher education and training (II5), and Technological readiness (II6). Output indicators (OI) represent following four pillars – Goods market efficiency (OI1), Labour market efficiency (OI2), Financial market development (OI3), Market size (OI4), Business sophistication (OI5), and Innovation (OI6). Importance of pillars for the issue of competitiveness describes GCR (WEF, 2018).

The reference period 2007-2018 includes years of growth dynamics, decline and stagnation, and recession, i.e. pre-in-post crisis years. Time-series is set concerning the GCI concept – including useful input-output indicators to DEA – data before the GCR 2006 edition is not available due to changes in the GCI methodology. DEA calculates annual productivity and efficiency changes dynamically across the reference period.

4.2 Discussion of Results

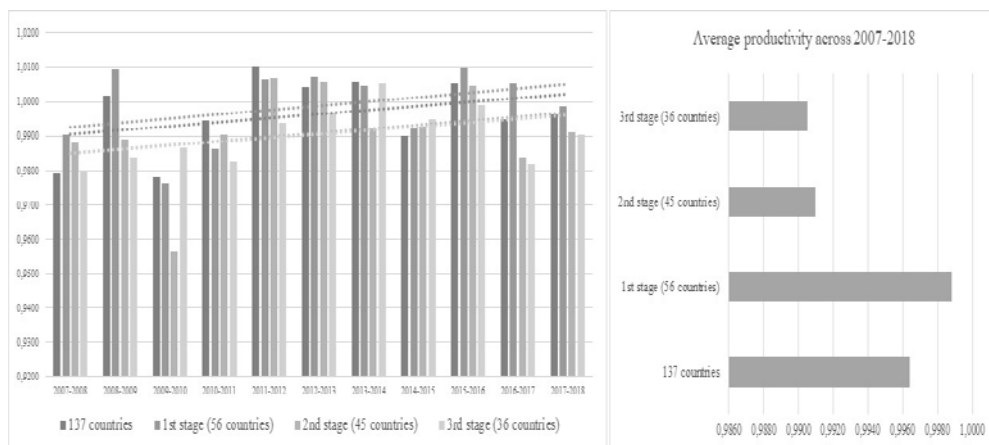
The empirical strategy of measuring WTO members' productivity consists of a three-step procedure: first, in the processing phase, a database of relevant indicators is created. Secondly, the application of DEA to assess the efficiency score of WTO members in the use of six inputs for production of six outputs in the field of competitiveness. Thirdly, groups of countries (in the form of the national average) are defined based on MPI scores. DMUs can be sort into groups, taking that the level of association is high among parties or participants of the same cluster and low among parties or participants of another cluster. Tab. 1 presents year-on-year productivity changes for the whole sample of 137 WTO countries as well as for countries divided into stages of development gained in the form of national averages as well as average productivity across the whole reference period.

Table 1: Average Productivity for Year-On-Year Changes

WTO members/ reference period	OO MPI						
	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
137 WTO countries	0.9792	1.0017	0.9781	0.9946	1.0102	1.0042	1.0057
1 st stage (56 countries)	0.9904	1.0097	0.9762	0.9864	1.0066	1.0071	1.0046
2 nd stage (45 countries)	0.9880	0.9890	0.9564	0.9903	1.0068	1.0060	0.9921
3 rd stage (36 countries)	0.9797	0.9838	0.9865	0.9825	0.9940	0.9967	1.0055
WTO members/ reference period	OO MPI						
	2014-2015	2015-2016	2016-2017	2017-2018	MIN	MAX	2007-2018
137 WTO countries	0.9902	1.0053	0.9948	0.9964	0.9781	1.0102	0.9964
1 st stage (56 countries)	0.9923	1.0099	1.0052	0.9988	0.9762	1.0099	0.9988
2 nd stage (45 countries)	0.9929	1.0045	0.9836	0.9910	0.9564	1.0068	0.9910
3 rd stage (36 countries)	0.9950	0.9991	0.9817	0.9905	0.9797	1.0055	0.9905

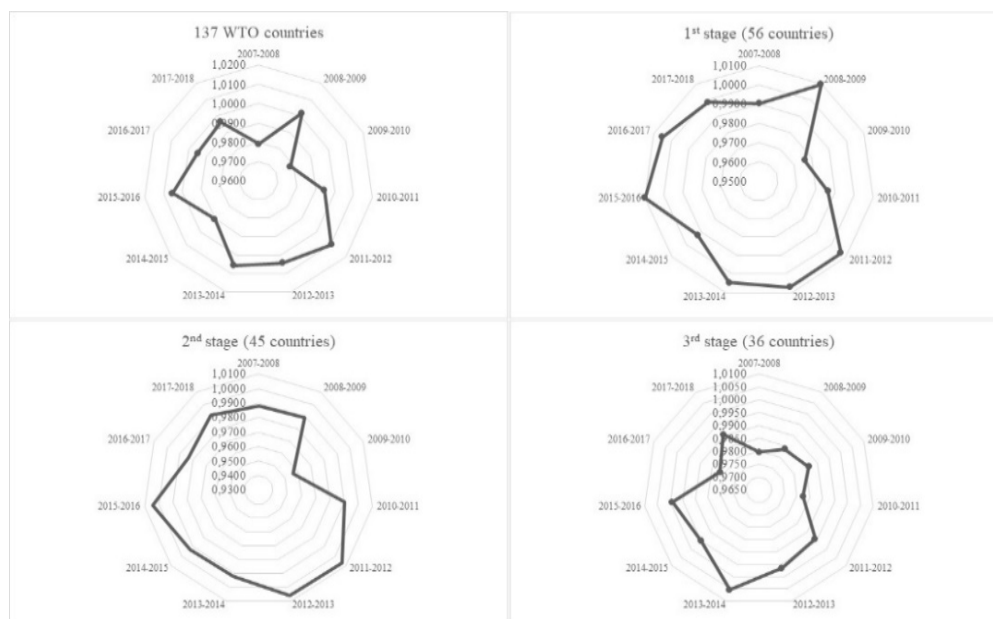
Source: own research, 2020

Based on minimal and maximal scores, most of the evaluated groups recorded the lowest productivity in the period 2009-2010, which is logical concerning the impacts of the crisis. Two rated groups filed the highest productivity in the period 2011-2012, and the other two groups later. Overall, increasing trend prevails over the decreasing direction for all groups of DMUs in each year-on-year change (see trend lines in Fig. 1). What do the results mean in terms of MPI? MPI less than one shows a decrease in productivity, MPI equals to one show status quo, MPI higher than one shows an increase in productivity. So here it is worth mentioning that the increasing trend of MPI seems to be positive information. Based on mean values, factually it means that in comparison of seasonal changes within 2007-2018, the overall productivity of 137 WTO countries has recorded firstly decreasing trend, after that increasing trend and finally mostly falling trend at the end of the reference period what signs impacts of crisis causing a decline in most macroeconomic indicators captured by GCI.

Figure 1: Productivity Trend of Evaluated Groups

Source: own research, 2020

Conclusions for the evaluated groups show Fig. 2. Level of productivity does not show extreme diversity and variability in the sample. Across stages of development, MPI distinctions are not essential in efficient and inefficient groups. Results of 56 states within the 1st stage show a stable trend for productivity level recorded in most cases, i.e. the permanent number of increasing and decreasing MPI scores. Also, in this case, overall, increasing trend prevails over the decreasing direction. For the sample of 45 states within the 2nd stage as well as results of 36 states within the 3rd stage, lower values prevailed above the higher profits, but overall the lower score recorded a growing trend over time.

Figure 2: Results of Evaluated Groups

Source: own research, 2020

5. Conclusion

Performance is an essential condition and assumption for further growth and development in a broader sectoral or territorial comparison. The purpose of evaluation of the territories' activities is generally enhancement and support of performance in both its aspects, i.e. efficiency and effectiveness. Assessment of the performance is an essential part of the complex macroeconomic management and should help and serve foci to the decisions of policy-makers. Especially nowadays, governments require a sufficient idea and knowledge about the current competitive position and underlying factors of competitiveness which positively or negatively affect this position. By knowing and understanding these patterns, the policy-makers could better change the development potentials as well as limitations to know which activities are needed to support or to limit. All this is necessary for plotting a development trajectory toward the desired end state, as introduced by Martin (2003).

Purpose of the paper is to map competitive performance at a macroeconomic level for WTO members. The expected results are of significant variation within the whole sample because countries with weak competitiveness locate in the group of strongly competitive states – thus a higher degree of heterogeneity is expected. Disparities are diminishing in the assessment of states within stages of development, which operate as more homogeneous groups. Related to a comparison of results between less and more developed countries – based on division countries into different stages of development – empirical results confirm the economic theory that less developed countries (in many cases) are growing at a faster or same pace than more developed countries. Developed countries are, however, the driver of the growth of less developed or developing countries, which in many respects depend on developed countries, especially regarding the financial investment, which creates back pressure on the developed countries (Dvoroková, 2016). The integration and the overall level of involvement of emerging countries in the world economy have challenged the attractiveness of traditional western hegemony in the form, especially the post-war triad (Europe, Japan and the United States).

Mainly, it is a threat to the EU as an investment destination and production location due to the import competition and out-sourcing and off-shoring processes. However, this is not all. The current technological changes and digital transformation, namely in the form of the 4th industrial revolution, are interrelated with increasing unemployment and fears that the EU is falling behind in innovation and technology. Such concerns as associated mainly to the leading competitors such as the United States and Japan are, however, consideration should also be given to BRICS group, i.e. countries Brazil, Russia, India, China and South Africa. The EU generally has a robust competitive position concerning advances and progress in technology, innovation, research and development, productivity, higher value added of production process, profitability as well as profits, but there are significant questions about its technological, innovative and knowledge leadership, as stated by the European Commission (2017) in the White Paper on the Future of Europe.

Situations and developments like these do not assure and ensure the smarter competitiveness of advanced countries but primarily depend on the power and capability of advanced countries to implement the essential structural reforms and subsequent ability to adapt to changing trade requirements. Processes of globalisation and liberalisation intensifying competition in higher value-added sectors where the most developed economies have traditionally had a comparative and competitive advantage. Such a situation is not the case only of large countries, such as China. The new variety has evolved with the development of new technologies and new organisational structures, especially under the 4th industrial revolution. Many countries feel the threat of being outperformed by other countries, and therefore, they have to utilise their competitive advantages efficiently.

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Project Management Methodology of the European Commission. Can “OpenPM²” Ensure Successful Project Managers?

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Abstract

When is the Open Project Management Methodology (OpenPM²) solution relevant for project manager? For project manager looking for free and easy to use project management methodology. What can OpenPM² offer to project manager? OpenPM² is a project management methodology designed by the European Commission in 2018. Its purpose is to enable project teams to manage their projects effectively, and to deliver solutions and benefits to their organisations and stakeholders. While OpenPM² is suitable for any type of project, it is ideal for projects related to the public sector, or EU programmes, grants and projects. OpenPM² is a free version of the PM² developed by the Commission in 2007. It incorporates elements from globally accepted best practices, standards and methodologies. OpenPM² gives open access to the PM², widening the circle of beneficiaries across Europe and enriching the methodology with additional good practices and examples. It aims to improve project management competency in the EU.

Keywords: European Commission, methodology, OpenPM², project manager

JEL Classification: O10, O22, O52, R58

1. Introduction

Interest in Project Management (PM) is growing significantly. And it's not just in business. The global need for skilled PM is being raised by such organizations as the International Monetary Fund, the World Bank and the European Union (EU) (Turečková, 2018). Nowadays, PM has developed into many activities in order to plan, co-ordinate and control the complex and diverse activities of wide range of projects (European Commission, 2014, 2018b). What is the reason for so high level of popularity of PM in the EU and co-financed of development activities from the EU funds? What is the methodological background of this process? Answering these questions is the aim of the paper. PM² is a Project Management Methodology developed by the European Commission (EC). Its purpose is to enable Project Managers to deliver solutions and benefits to their organisations by effectively managing the entire lifecycle of their project. PM² has been created with the needs of European Union Institutions and projects in mind, but is transferrable to projects in any organisation. PM² is a light and easy-to-implement methodology which project teams can tailor to their specific needs. PM² is fully supported by a comprehensive training programme (including workshops and coaching sessions), online documentation and an active Community of Practice (currently only available within the European Commission and to a number of affiliate European Institutions). PM² incorporates elements from a wide range of globally accepted project management best practices, captured in standards and methodologies. Its development has also been influenced by operational experience on various projects both within the European Union (EU) Institutions and external bodies (Melecký, 2018).

2. Theoretical Background – Key Terminology

This section introduces basic project management concepts and provides the context for a better understanding of the PM² Methodology.

Project is a temporary organisational structure set up to create a unique product or service (output) within certain constraints such as time, cost and quality (European Commission, 2017).

- **Temporary** means that the project has a well-defined start and end.
- **Unique** output means that the project's product or service has not been created before. It may be similar to another product, but there will always be a degree of uniqueness.
- A project's output may be a **product** (e.g. a new application) or a **service** (e.g. a consulting service, a conference or a training programme).

The project is defined, planned and executed under certain external (or self-imposed) constraints. These can relate to scheduling, budgeting, quality, but also to the project's organizational environment (e.g. risk attitude, capabilities, available capacity, etc.) as mentioned Melecký and Staníčková (2018).

A successful project ends when its objectives have been achieved and all deliverables have been produced and accepted by the organisation or person that requested the project (the client). The deliverables are then handed over to the client and the project team is disbanded.

Project Management can be described as the activities of planning, organising, securing, monitoring and managing the resources and work necessary to deliver specific project goals and objectives in an effective and efficient way (Hytinen, 2017).

The project management approach used should always be tailored to the needs of the project. When using PM², a Project Manager should use (and if needed after tailoring) only those parts that contribute to the effective management of their project.

Project Manager oversees the project on a daily basis and is responsible for delivering high-quality results within the identified objectives and constraints, ensuring the effective use of the allocated resources. More widely, the Project Manager's responsibility also includes risk and issue management, project communication and stakeholder management. **The Project Manager's responsibilities:**

- a. Executes the project plans as approved by the Project Steering Committee.
- b. Coordinates the Project Core Team, ensuring the effective use of the allocated resources.
- c. Ensures that project objectives are achieved within the identified constraints, taking preventive or corrective measures where necessary.
- d. Manages stakeholder expectations.
- e. Oversees the creation of all management artefacts (except the Project Initiation Request, Business Case and Business Implementation Plan) and secures approval from the Project Owner or the Project Steering Committee.
- f. Ensures the controlled evolution, of products delivered, through proper change management.
- g. Performs risk management activities for project-related risks.
- h. Monitors project status and reports to the Project Steering Committee on project progress at regular predefined intervals.
- i. Escalates unresolvable project issues to the Project Steering Committee.
- j. Liaises between the Directing and Performing Layers of the project.

3. Methodology of OpenPM²

Open PM² is a European Commission initiative, which brings the PM² Methodology and its benefits closer to its broader stakeholders and user community. The Open PM² Initiative provides EU institutions, contractors and public administrations, as well as broader stakeholders, with open access to the PM² Methodology and associated resources. Its goal is to enable increased effectiveness in the management and communication of project work and thus to serve the objectives of the EU and the needs of member states and citizens.

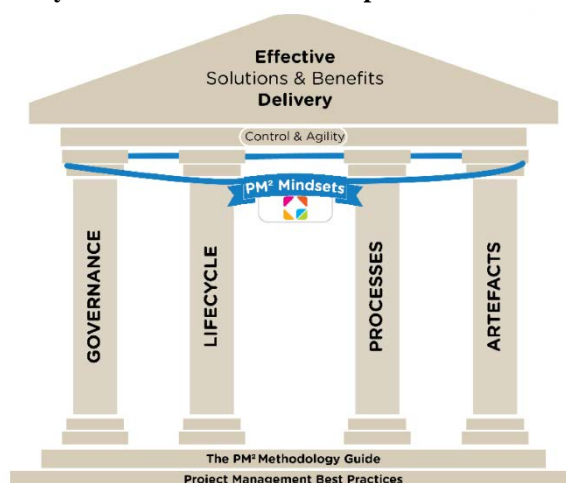
The Initiative also seeks to rectify mistakes of the past, when efforts were duplicated and divergent project management approaches were sponsored rather than promoting convergent approaches based on similarities and the common interest of the broader European community. By opening PM², the Initiative aims to enhance project management competency within Europe, leading to increased project efficiency and success. **Open PM² does this by:**

- rationalising project management approaches across European Union Institutions and beyond,
- establishing a common language and processes, resulting in effective project communication,
- providing a common set of productive mindsets,
- enabling transparency and visibility for cross-organisational project collaborations,
- enabling better project management, leading to improved cost/effort efficiency,
- enabling the improved monitor and control of EU-funded projects and grants,
- applying the European Commission decision of 12 December 2011 (2011/833/EU) on the “reuse of Commission documents to promote accessibility and reuse”.

The PM² Methodology is built on Project Management best practices and is supported by four pillars (see Figure 1):

1. a project governance model (i.e. Roles & Responsibilities),
2. a project lifecycle (i.e. Project Phases),
3. a set of processes (i.e. project management activities),
4. a set of project Artefacts (i.e. documentation templates and guidelines).

Figure 1: Productivity Trend of Evaluated Groups



Source: European Commission, 2018a, p. 13

The spirit of the PM² Methodology is further defined by the PM² Mindsets, which provide the glue that holds together the PM² practices and provide a common set of beliefs and values for PM² project teams.

4. Practical Aspects of OpenPM² – Solution for Project Managers?

The PM² processes, artefacts, tools and techniques help project teams make decisions on trade-offs between a project's time, cost, scope and quality dimensions. The PM² Mindsets are the attitudes and behaviours that help project teams focus on what is crucial to achieving their project's goals. They help project teams navigate the complexities of managing projects in organisations and make the PM² Methodology both more effective and complete. Thus, **Project Managers and project teams that practise PM²:**

1. apply PM² best practices to manage their projects,
2. remain mindful that project management methodologies are there to serve projects and not the other way around,
3. maintain an outcomes orientation in relation to all projects and project management activities,
4. are committed to delivering project results with maximum value rather than just following plans,
5. foster a project culture of collaboration, clear communication and accountability,
6. assign project roles to the most appropriate people for the benefit of the project,
7. balance in the most productive way the often-conflicting project management of product, purpose, process, plan, people, pleasure/pain, participation, perception and politics,
8. invest in developing technical and behavioural competences to become better project contributors,
9. involve project stakeholders in the organisational change needed to maximise project benefits,
10. share knowledge, actively manage Lessons Learned, and contribute to the improvement of project management within their organisations,
11. draw inspiration from the PM² Guidelines on Ethics and Professional Virtues.

To remain mindful of the PM² Mindsets, Project Managers and project teams that practise PM² should ask themselves the following important **Infrequently Asked Questions**:

- a. *Do we know what we are doing?* Tip: Develop a clear and shared project vision. Manage the project using a holistic approach and optimise the whole project, not just parts of it. Follow a process but stay Agile and try to regularly remind yourself why you are doing something.
- b. *Do we know why we are doing it? Does anyone really care?* Tip: Make sure your project matters. Understand its goals, value and impact, and how it relates to the organisational strategy. Define upfront what project success is and deliver maximum value and real benefits, not just outputs.
- c. *Are the right people involved?* Tip: People make projects work. The primary criterion for involving people and assigning project roles should be to serve the needs and objectives of the project, and not politics, friendship, functional hierarchy, proximity or convenience.
- d. *Do we know who is doing what?* Tip: Know what you should be doing, and make sure others know what they should be doing. Is it clear to everyone? Clearly define and understand roles, responsibilities and accountabilities.

- e. *Deliver at any cost or risk?* Tip: Show respect for people's work and organisational funds and avoid high-risk behaviour and tactics. Always keep in mind that it is not just about the end result – how you get there also matters. Manage your projects based on positive values and principles.
- f. *Is this important?* Tip: Everything is NOT equally important. Identify, and agree on, the project's Critical Success Criteria, Minimum Viable Product and Critical Success Factors, and allocate effort and attention both tactically and strategically for the benefit of both the project and project management goals.
- g. *Is this a task for "them" or for "us"?* Tip: Make sure that client and provider groups work as one team towards a common goal. Real teamwork really works; so foster clear, effective and frequent communication.
- h. *Should I be involved?* Tip: Contribute from any position. Be proud of the skills, value and positive attitude you bring to the project. Help everyone who needs to be involved get involved. Promote and facilitate the contributions of all stakeholders.
- i. *Have we improved?* Tip: Commit to ongoing self- and organisational improvement by gathering and sharing knowledge. Project teams should reflect on how they can become more effective and adjust their behaviour accordingly.
- j. *Is there life after the project?* Tip: The product (or service) lifecycle has just begun! Make sure you have contributed to its success.

The PM² Mindsets are the glue that holds the PM² processes and practices together. They provide a common set of beliefs and values for all PM² practitioners. **The PM² Mindsets:**

- a. help project teams navigate through the complexities of project realities,
- b. help project teams (re)position project management goals in a wider organisational context,
- c. remind project teams what is important for project success,
- d. are useful reminders of effective attitudes and behaviours.

Why do certain Project Managers bring their projects in on time, on budget and with satisfied customers while others have a hard time? Let's look at the habits that highly successful Project Managers share to find out. These habits get mentioned over and over again in performance appraisals and in end-of-project reviews where the client, team or sponsor is offering feedback to the Project Manager. Finally, the most important question, what are the **habits of successful Project Managers?**

1. Using the Right Team.
2. Managing Project Issues.
3. Coping with Changes.
4. Managing Project Costs.
5. Teambuilding.
6. Understanding Processes.
7. Updating the Schedule.
8. Managing Project Risk.
9. Tracking Time.
10. Delivering Business Change.

You don't need to have ten years of experience to deliver success every time. By changing your habits and brushing up your skills you can drastically improve the chances of your project being a success and give yourself a less stressful time at work as well. Honestly, how much are we able to change our habits, ideally bad habits?

And something else – **virtues**. Project management is not a technical job. It is about getting people to perform work that must be done to meet the objectives of the project. In that respect, the classical definition is correct, the manager must get people to perform above the minimum acceptable performance level. The reason is that this minimum level is the survival level for the organization, and any company that just manages to survive will not do so for long. Eventually the competition will pass it by, and the organization will die. So, the first skills that Project Manager needs are people skills. Herein lies the source of major problems for many Project Managers – and general managers, too, for that matter. Most managers know more about getting performance from computers, machines, and money than they do about getting people to perform. There are many reasons for this, but chief among them is that nobody has ever taught them practical methods for dealing with people, and we simply aren't born knowing how. So far as we know, the geneticists have not yet found a people-skills gene that endows a person with these skills. Furthermore, many Project Managers who have strong technical backgrounds find it difficult to deal with people effectively. They are things oriented, not people oriented, and some will even go so far as to say that they hate this aspect of the job. They forget about being project managers if this is true. You usually aren't very effective at something you hate doing, but, beyond that, why spend your life doing something you hate?

Therefore, it is time for virtues. Virtues are strengths (or excellence) of the person who possesses them and refer to the ideal management of our attitude, behaviour and actions that drive personal and professional performance. Virtues are expressed in a specific context as the healthy mean between the extremes of excess and deficiency, which, however, is not universal, but subjective, and as such will vary between individuals and their respective circumstances. This healthy mean should be determined by good judgment. Virtues are developed through practice. Their application helps us discover the right principles of conduct, to know what we ought to do in a given situation. Acting in a virtuous way enables us to raise the effectiveness and efficiency of our performance as a means to serve our personal, professional, as well as our higher and more inclusive goals. All virtues are required for the application of professional competences; however, the intellectual virtues of judgment, prudence and insightfulness need to be transversally applied for their development. The following Tab. 1 shows the strongest relations of moral virtues to key professional competencies.

Table 1: Project Manager – Competences, Virtues and Key Points to Remember

Competence	Key Virtues
Leadership	All virtues
Relationships and engagement	Fairness, Friendliness, Generosity, Honesty, Humour, Temperance
Self-reflection and-self management	Calmness, Courage, Friendliness, Honesty, Honour, Temperance
Change and transformation	Calmness, Courage, Friendliness, Generosity
Personal communication	Calmness, Friendliness, Generosity, Humour
Resourcefulness	Fairness, Friendliness, Generosity, Honesty, Honour
Results orientation	Honour, Generosity, Magnanimity, Magnificence
Teamwork	Calmness, Courage, Fairness, Friendliness, Generosity, Honour, Magnificence
Negotiation	Courage, Fairness, Friendliness, Generosity, Honesty, Honour
Conflict and crisis management	Calmness, Fairness, Friendliness, Generosity
Personal integrity and reliability	Calmness, Courage, Fairness, Friendliness, Honour, Temperance
Culture and values management	All virtues
Key Points to Remember	
Project Manager must understand mission and vision of organization first, see how project they are managing meshes with organization's mission, and then steer project to ensure that interests of organization are met.	
Project Manager must exercise leadership and management skills. The first skills Project Manager needs are people skills.	
One of the biggest traps for Project Managers is to perform technical work in addition to managing the job because, when there is a conflict between performing the two, the project manager cannot neglect the management aspects.	

Source: own elaboration based on European Commission (2018a) and Heagney (2016)

5. Conclusion

Project management is not for everyone. It is not a technical job. It is about getting people to perform work that must be done to meet the objectives of the project. We consider to be the most important attributes for project managers to have, we say that people skills are numbers one through three. Then, below that, comes everything else. If you can deal with people, you can either learn to do everything else or delegate it to someone who can do it. But being able to do everything else without being good at dealing with people just won't cut it. Now the question is, do you really want to be Project Manager? Do you like having responsibility with very limited authority? Do you enjoy working on impossible deadlines, with limited resources and unforgiving stakeholders? Are you, in other words, a bit masochistic? If you are, then you will love being Project Manager. If you are the boss of Project managers, these are things you should consider in selecting people for the job. Not everyone is cut out for the job.

Last but not least, what is the role of Project Managers? The role of Project Managers seems to be very misunderstood throughout the world. Because many Project Managers arrive at their positions as a natural progression from their jobs as engineers, programmers, scientists, and other kinds of jobs, both they and their bosses see the job as technical. This simply isn't true. If you remember that every project produces a product, service, or result, then there is a technical aspect to the job. However, it is a question of who is responsible for what, and Project Managers who must manage the project and handle technical issues are set up to fail from the beginning. For now, suffice it to say that the primary responsibility of Project Manager is to ensure that all work is completed on time, within budget and scope, and at the correct performance level. That is, he or she must see that the Project Planning, Scheduling & Control targets are met. His or her primary role is to manage the project, not do the work!

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Green Management in the European Union

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Abstract

The European Union makes numerous efforts for sustainable development towards the green economy and currently is one of the world's leaders in the pursuit of climate protection objectives. The green economy stimulates the growth of income and employment thanks to public and private investments, that reduce carbon dioxide emissions and pollution, promotes greater efficiency in the use of energy and resources. These characteristics are measured by variables grouped in Sustainable Development Goals (SDGs). One of the SDGs group is dedicated to "Climate Action". Therefore, the paper aims to compare compliance with climate protection objectives among EU countries, based on secondary data aggregated to the country level. The article presents calculations results obtained with used in this paper the Hellwig method to assess and compare different variables in 2010 and 2016. The assessed SDG group allows understanding climate action and green management as a platform of cooperation and integration of European Union countries, which together are successful in the creation of the green economy. It is possible to indicate a group of best performers among EU countries regarding green management and to identify changes in such rankings.

Keywords: *Green European Integration, Green Economy, Sustainable Development*

JEL Classification: *O14, Q38, Q58*

1. Introduction

The pursuit of Sustainable Development (SD) lies at the heart of the socio-economic policy of the European Union (European Commission [online], 2020) and recently it has been considered as a platform of the cooperation of the member states and one of the Green European Integration factors (Grudziński and Sulich, 2018). Although, the SD is derived from the idea that economic development, it must be based on the principle of maintaining synergies between social (institutional and political facets), economic and environmental aspects (Sulich and Zema, 2018). The SD is a society's ability to last indefinitely within the natural cycles that occur in the biosphere. The important role of the idea of SD in the EU is evidenced by the fact that it has been also included in the Europe 2030 Strategy (European Commission [online], 2020). The subtitle of this document already refers to SD and reads: "Towards a sustainable Europe by 2030" (European Commission [online], 2020). Therefore, it is a development directed not only at solving contemporary economic problems, especially the problems of availability of raw materials but in particular social exclusion and European integration (Kryk, 2020).

The green management is an implementation of the presented concept of Green Economy (GE), which transfers theoretical considerations related to SD and GE to the field of business practice via pro-ecological strategy (Sulich and Grudziński, 2019). GE is a response to the growing environmental problems that arose from the current way of production and farming

(the brown economy - based on coal) and contributes to the gradual reduction of development opportunities of future generations. Moreover, the GM assumes the need to increase attention to the state and quality of the environment (Kierepka-Kasztelan, 2018). The GE leads to change of the current priorities of management to a more sustainable, i.e. less emissive one, recovering secondary raw materials and re-processing them in the production process and taking into account environmental values as important elements for the development of future generations (Sulich and Zema, 2018). These changes are taking place both in the sphere of transfer of innovations and technologies measured by patents (Rutkowska and Pakulska, 2018), as well as in the sphere of management (Kabus, et al., 2018), which concerns relevant, beneficial and effective decisions. This paper aims to compare compliance with climate protection objectives among EU countries, based on secondary data obtained from the companies and individuals aggregated to the country level. The adopted method was Hellwig's method (Sulich, et. al. 2020; Kasztelan, 2017).

2. Problem Formulation and Methodology

The EU's sustainability agenda, with the adopted form the United Nations 17 Sustainable Development Goals (SDGs) and their related 169 targets provide a new policy framework towards ending all forms of poverty, fighting inequalities and tackling climate change while ensuring that no one is left behind (Eurostat [online], 2020). The EU is going to pursue this goal through sustainable consumption and production, sustainably managing its natural resources, ensuring just transition and economic viability, and taking urgent action on climate change (European Commission [online], 2020). Although there are many goals and targets to achieve, there is only one SDG no. 13 dedicated to the "Climate Action", which presents a set of the seven indicators measures collected by Eurostat (Table 1). Originally in the Eurostat, there are more indicators given, but some of them are still not measured. This goal "aims to strengthen countries' resilience and adaptive capacity to climate-related hazards and natural disasters by integrating climate change mitigation and adaptation measures into national strategies, policies and planning" (Eurostat [online], 2020).

Table 1: Set of Variables

Indicator Symbol	Meaning and Measure
x ₁	Greenhouse gas emissions [Index, 1990=100]
x ₂	Greenhouse gas emissions intensity of energy consumption [Index, 2000=100]
x ₃	Contribution to the international 100bn USD commitment on climate-related expending [in mln Euro]
x ₄	Primary energy consumption [index, 2005=100]
x ₅	Final energy consumption [index, 2005=100]
x ₆	Share of renewable energy in gross final energy consumption by sector [%]
x ₇	Average CO ₂ emissions per km from new passenger cars [in g of CO ₂ per km]

Source: Author own elaboration based on (Eurostat [online], 2020).

Presented by the Eurostat data are aggregated on the country level information from the companies. In table 1, the indicators' symbols, meaning, and measures are presented. Because of their different measures' dimensions, their comparability is limited (Kryk, 2020). To solve

this problem, the standardization method and then the Hellwig method are required (Kasztelan, 2017).

The task of the Hellwig method is the ordering, that is, determining the order of objects according to a given criterion (Sulich et. al, 2020). A synthetic measure of development is the tool of ordering methods. The use of a taxonomic measure of development makes it possible to classify objects described by many features using one synthetic variable (Kasztelan, 2017). The Hellwig method is based on standardized values of diagnostic features. The distance of each test object from the established development pattern is determined by the formula:

$$d_i = [\sum_{k=1}^K (z_{ik} - z_{0k})^2]^{\frac{1}{2}} \quad (1)$$

where:

d_i = the distance of the object from the pattern,
 i = number of objects (countries), $i = 1, 2, \dots, N$,
 k = number of features (variables), $k = 1, 2, \dots, K$,
 z_{ik} = standardized values of features, and

$$z_{ik} = \frac{x_{ik} - \bar{x}_k}{S_k} \quad (2)$$

z_{0k} = development model,
 S_k = standard deviation.

The distance d_i (Formula 1) can be used to compare the level of development of the examined objects; the smaller the value the higher the level of development has reached the given object (Kozar, 2016; Kasztelan, 2017; Kryk, 2020). To normalize the value of the measure, a relative taxonomic measure of development was established, using the formula:

$$z'_i = 1 - \frac{d_i}{d_0} \quad (3)$$

where:

z'_i = taxonomic measure of development for the object,
 d_0 = a norm that ensures that variable z'_i takes values from the range [0, 1], according to the equation:

$$d_0 = \bar{d} + 2s_d \quad (4)$$

The measure z'_i (Formula 3) a higher value represents the better the position of the object in the set (higher level of the examined objects). Therefore, the closer its value is to 1, the greater green management by EU countries, as well as the achievement of SDG no. 13 of the Agenda 2030. Based on z'_i (Formula 3) values, a ranking of EU countries in years 2010 and 2016 was established, which made it possible to assess the degree of green management by these countries and to indicate whether the desired changes take place to progress in the implementation of the studied SDGs (Kryk, 2020).

3. Problem Solution - Green Management in the European Union

The environmental management in the European Union is implemented through various legal regulations, of which the treaty provisions have the highest rank. The first legal foundations of environmental management in the EU were formulated in 1987, the same in which the concept of sustainable development was formulated (Grudziński and Sulich, 2018). At that time, a provision was introduced into the European Community Treaty presenting the current policy objectives of the European Union, which still are:

- preserving, protecting and improving the quality of the environment;
- protection of human health;
- prudent and rational use of natural resources;

- supporting measures at the international level to solve regional or worldwide environmental problems.

At that time, also the basic principles of environmental policy were formulated, such as prudence, prevention and financial responsibility of the polluter, which are still in force today.

The task for the European Union, are: support a harmonious, balanced and sustainable economic life, a high level of employment and a high degree of social protection, gender equality, sustainable non-inflationary growth, a high degree of competitiveness and convergence of economic achievements, a high degree of protection environment and improving the quality of the environment, raising the quality of life, economic and social cohesion and solidarity between member states (Kozar, 2016).

The transformation of the current management method (Martusewicz, 2017; Kabus, et al., 2018) into a more sustainable one, i.e. a green economy and the creation of green jobs (Rutkowska-Podołowska et al., 2016), brings development opportunities for the local labour markets and contributes to the Green European Integration (Grudziński and Sulich, 2018). Benefits for the European Union labour market arise in qualitatively different jobs than before with the development of the green economy. On the other hand, there is an increase in the total number of jobs in the local labour market related to cross-sectoral impact (Rutkowska-Podołowska et al., 2016).

The European Union has legislative competence in the field of environmental protection, while the Member States are responsible for the implementation of legal acts. The scope and tasks of environmental policy were formulated in the Maastricht Treaty on European Union of 1993. It stated that the tasks of the European Union related to supporting sustainable and harmonious development will be implemented with respect for the natural environment. The new treaty on the European Union gave the possibility of using safeguard clauses. Member states could also apply stricter environmental standards, but they must notify the European Commission of their application (Lovciová. and Pakšiová, 2018). Then there is a difference in many member states between public environmental management (environmental protection) and private environment management (focused on the labour and production conditions).

In Table 2 rankings of 28 European Union countries are presented. Calculations assume that each country implement actions towards SD and the presented results are the assessment of the progress towards SDG no.13 – climate action. After standardizing the values of the features (variables) and determining the distance of each study object from the established standard, a relative taxonomic measure of development z_i (following the previously given Formula 3) for 2010 and 2016 was calculated, reflecting the level of sustainable energy provision. Then, the examined countries were sorted according to the value of this measure, indicating the change in the place in the ranking (Table 2). The arrow \uparrow indicates the improvement of the place in the ranking, and the arrow \downarrow a deterioration, constant means maintaining the position.

In 2010, the average value of the measure z_i (Formula 3) for the EU was 0.44 and increased to 0.72 in 2016. In the research periods, only United and Poland remained on their positions 1st and 14th place respectively. The rest of countries has changed their ranging number more or less dramatically, suggesting a fairly large variation in the realization each country green management related to the climate action and within the community itself. This suggests progress in achieving Goal 13 of the Agenda 2030 on the EU scale. Moreover, in 2016 the lowest measure z_i was almost on the level of the EU average from 2010.

Table 2: Rankings of Countries According to the Value of the z_i Measure

2010			2016		
Country	z_i	No. in ranking	Country	z_i	No. in ranking
United Kingdom	1,00	1	United Kingdom	1,00	1 const.
Spain	0,58	2	Cyprus	0,95	2↑
Sweden	0,53	3	Finland	0,85	3↑
Netherlands	0,52	4	Malta	0,81	4↑
Denmark	0,47	5	Sweden	0,79	5↓
France	0,46	6	Greece	0,76	6↑
Italy	0,44	7	Netherlands	0,74	7↓
Belgium	0,44	8	Croatia	0,73	8↑
Austria	0,44	9	Latvia	0,72	9↑
Finland	0,43	10	Austria	0,72	10↓
Germany	0,42	11	Denmark	0,70	11↓
Ireland	0,40	12	Spain	0,70	12↓
Luxembourg	0,39	13	Lithuania	0,70	13↑
Poland	0,38	14	Poland	0,69	14 const.
Czechia	0,38	15	Bulgaria	0,69	15↑
Portugal	0,38	16	Slovenia	0,69	16↑
Hungary	0,38	17	Romania	0,69	17↑
Romania	0,38	18	Portugal	0,69	18↓
Slovenia	0,38	19	Slovakia	0,69	19↑
Slovakia	0,38	20	Estonia	0,69	20↑
Greece	0,38	21	Belgium	0,69	21↓
Bulgaria	0,38	22	Italy	0,69	22↓
Estonia	0,38	23	Germany	0,69	23↓
Croatia	0,38	24	Czechia	0,69	24↓
Lithuania	0,38	25	Ireland	0,69	25↓
Latvia	0,38	26	Luxembourg	0,69	26↓
Cyprus	0,38	27	Hungary	0,69	27↓
Malta	0,38	28	France	0,42	28↓

Source: author's calculations.

It should be emphasized that the average relative development measure for the EU reflects a slightly positive trend of changes in this area which stands in the compatibility with the similar researches related to the SDG of the Agenda 2030. These results suggest that there is cooperation in achieving the SDG in the EU supported by the legislative actions.

4. Conclusion

The European Union (EU) has declared itself to be committed to the goal of Sustainable Development. In six years, the EU, as an organization, has made significant progress in improving climate change and introducing green management. Although the EU countries are strongly different from each other in terms of providing tools of the environmental or green management, as evidenced by differences in the z_i measure in the analysed years. The decrease in these disparities is positive and suggest that problems of the natural environment become a

common problem of all EU states and in this way a plane of Green European Integration. This leads to the ecological modernization and provides the framework within which it combines economic and environmental objectives. Therefore, the EU's commitment to sustainable development is not simply an act of ecological deception but bears important transformative potentials.

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Refugee Crisis and the Rise of European Far Right: The Case of Italy

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Abstract

Since the advent of the refugee crisis peaking in 2015, the European far right has been on the rise. Migration crisis paradigm became a mainstream in interpreting the growing influence of identity politics. Various articles linked the rise of right-wing extremism to the escalation of refugee inflows nevertheless, we do not share this standpoint and consider the issue of far right to be a deeper structural problem. This paper aims to make a threefold contribution to the current debate on rise of the far right in European countries, focusing on Italy. Firstly, we briefly encompass the issue of far right and demonstrate theoretical intersections between the rise of far right and the refugee crisis. Secondly, a graphic schema of asylum seekers' sites, reception and arrival centers is presented, allowing us to express the impact of refugee inflows on the increase of Lega's election results via a spatial autocorrelation analysis. Thirdly, it is argued that the refugee crisis interpretation of the rise of far right is ambiguous and lacks an empirical foundation. Our research presented herewith aims to encourage a more profound discussion concerning relation between far right parties and refugee crisis.

Keywords: Refugee crisis, Far-Right, Italy, Lega, Matteo Salvini

JEL Classification: F50, N3, P16

1. Introduction

In recent years, the world has witnessed unprecedented onset of the far right parties sweeping through Western hemisphere. Far right, right-wing populists and extreme right political movements gaining strengths after the societal upheavals resulting from Brexit, unexpected victory of Donald Trump or Marine Le Pen challenging the French establishment in Paris keep shaping the political discourse unpredictably. Since the early 1990s, there have been more academic papers concerning far right parties than of all other party families (Christian democrats, Social democrats, Greens) combined. In fact, in 2010 there were seven times as many articles on these political parties than on all other party families together (Mudde 2017, 2).

Mudde (2004, 543), Camus and Lebourg (2017, 21-22) or Fukuyama (2018) provide various definitions of (right-wing) populism, far right and (national) populism, respectively. Needless to say, it is by no means easy to define the characteristic features of the identity-based populism (extreme right, far right, radical right) and while it is not the aim of this paper to do so, throughout this paper we accept the term far right to cover the whole ideological spectrum. By utilizing Heywood's (2017, 105) basic quasi catch-all approach of the far right, we view these political parties to have an openly anti-immigration stance, which have drawn on national conservatism in adopting a 'backward-looking' and culturally, and perhaps ethnically, 'pure' model of national identity. Adoption of this catch-all approach will allow us to handle the issue

of far right quite loosely, so we are not bound by the theoretical delimitation originally targeted to cover certain political region or political groupings.

Having outlined the “Heywoodian” stance on the far right in the introduction, we identify the representative of the far right parties in Italy to be - *Lega*, originally secessionist party called *Lega Nord* in Italy, led by a former minister of interior Matteo Salvini is a historically autonomist movement fighting for the emancipation of Northern Italian region Padania. After Matteo Salvini rose to power in 2013, party morphed from a regional and Northern Italy-targeted electorate to the anti-migration, Eurosceptic and pan-Apenine far right party (Raos 2019, 106). Various authors identified different causes of the Lega’s electoral success. Albertazzi, Giovananni and Seddone (2018) consider the cause of the success to be the idiosyncratic metamorphoses from the secessionist movement into the pan-Italian populist party under popular leader Matteo Salvini. Orellana and Michelsen (2019, 760) emphasize their rigorous anti-liberal, nationalist and populist ideology. Cetin (2015, 379) concluded, that it was precisely the migration crisis on which Salvini’s Lega capitalized. Although not being rare to connect refugee crisis to the rise of far right, case of Italian Lega lacks significant empirical proofs. This paper aims to address this issue.

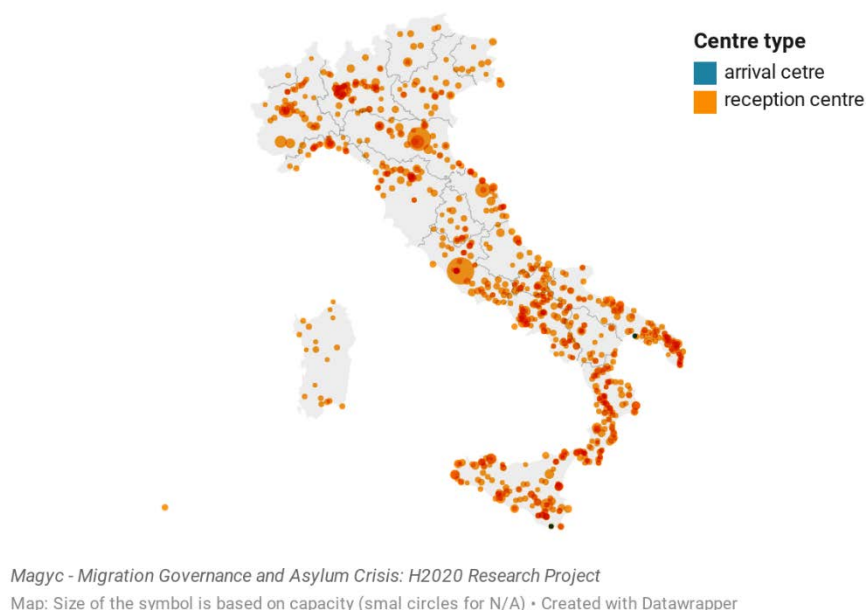
Although lacking rigorous evidence, immigration has become the uniting element of identity-based politics in developed liberal democracies. Anti-immigration stance is a crucial theoretical aspect concerning the political cleavages research, specifically globalist vs. nativist cleavage (Piketty 2018, 27). Other authors have further unfolded this theoretical concept by providing empirical proofs of immigration having a direct impact on the rise of far right. Early work of Coffé, Heyndels and Vermeir (2007) found the evidence, that the presence of Turkish or Maghrebian citizens in the Flemish municipal elections had a positive effect on the rise of popularity of far right opposition party Vlaams Blok. In paper analysing the impact of immigration on the election outcomes from city districts in Hamburg (1987-1998), Otto and Steinhardt (2014) concluded a positive and substantial impact of growing shares of foreigners on the political success of extreme right parties, with a negative association regarding the Greens. Several other papers proved these outcomes right, e.g. Harmon (2018) on the results from Danish municipalities. Halla, Wagner and Zweimüller (2017) documented that low-skilled and medium-skilled immigration (mainly from Turkey and ex-Yugoslavia) causes Austrian voters to turn to the far right (FPÖ). Dinas et al. (2019) noticed that Aegean islands close to the Turkish border experiencing sudden and drastic increase in the number of Syrian refugees augmented the vote share for Golden Dawn (neo-Nazi party) in 2015 Greek parliamentary election by 2 percentage points (44% at the average).

Basic logic suggests that far right is capitalizing on frustration and fear resulting from the sudden rise in the share of migrant stock. The theoretical channel fuelling anti-immigration stance of the electorate is twofold. Firstly, populist backlash against immigrants and refugees has some roots in the concern that the sustainability of the welfare state will be disturbed (Rodrik 2018, 17; Machyniak 2015, 987). The latter is built upon the premise that immigration disrupts and endangers the cultural norms of native population, naturally forcing the majority to protect the indigenous identity of the country (Murray 2017, 80). That will eventually trigger the “cultural backlash” (Norris and Inglehart 2019). It became a part of political folklore to conclude that far right parties attract voters by emphasizing the anti-immigration sentiments of the voting native population nevertheless, there is still a lack of causal evidence linking together immigration and votes for the far right. This paper has an ambition to contribute to the current debate linking together the rise of European far right and the refugee crisis in Europe (2015-2016). Relation between migration and voting attitudes represents a crucial aspect of the current studies concerning the rise of far right in Europe.

2. Problem Formulation and Methodology

The aim of this paper is to assess the impact of the rise of asylum seekers' sites (independent variable) on the increase of far right parties (dependent variable) via a spatial autocorrelation. Data collected under the Migration Governance and Asylum Crisis: H2020 Research project allow us to utilize the concentration of asylum seekers' sites (reception and arrival) in Italian regions as a potential variable contributing to the rise of far right. Protection System for Beneficiaries of International Protection and for Unaccompanied Foreign Minors (SIPROIMI), formerly known as Protection System for Asylum Seekers and Refugees (SPRAR) under which municipalities are voluntarily called to launch a reception center (809 centers by the beginning of 2020), contains all data needed to create the map of asylum seekers' sites in Italy (Figure 1). Furthermore, there exist four arrival centers (hot spots), one in **Apulia** (Taranto) and three in **Sicily** (Lampedusa, Pozzallo, and Messina).

Figure 1: Italy Regions Map of Asylum Seekers' Sites

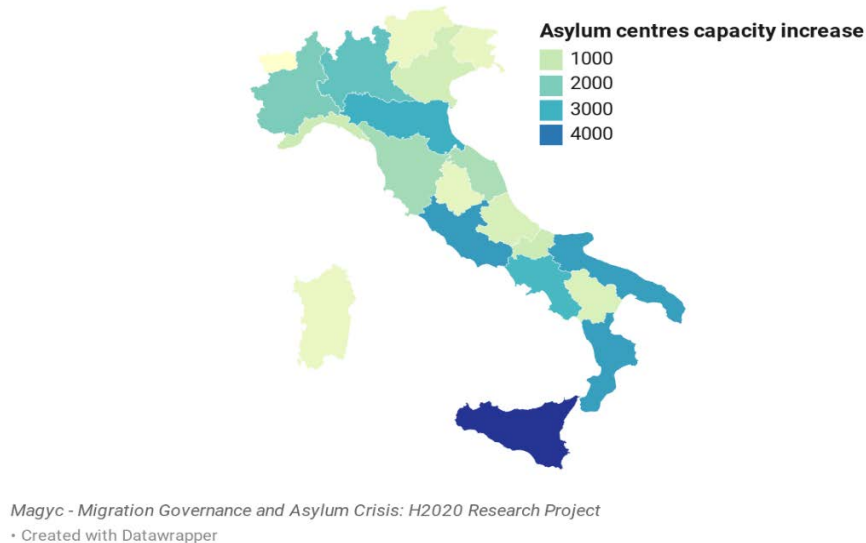


Source: Authors' elaboration based on data from Siproimi (2019).

The first step in the spatial analysis was to investigate how the migration variable, in this case the capacity of reception and arrival centers in Italy (Figure 2) and electoral variable developed on a municipal (regional) level through time. By using datawrapper chart program, we were able to represent both changes visually. Assumption for the model is made, that the capacity of the asylum centers was sudden and absolute. Next, we focused on the sub-national and sub-general elections, respectively. In order to plausibly visualize possible changes over time, regional elections provide the most suitable way. Data concerning elections results, regional elections in Italy (2010-2020), were obtained from the country's ministry of interior. There are twenty Italian regions in total. Although not taking place in the same year, second round of elections followed the advent of European refugee crisis (September 2015) when most of the sites have already been constituted, while the first one occurred before the September of 2015. We make an assumption that the impact of the asylum seekers' site is reflected in the election

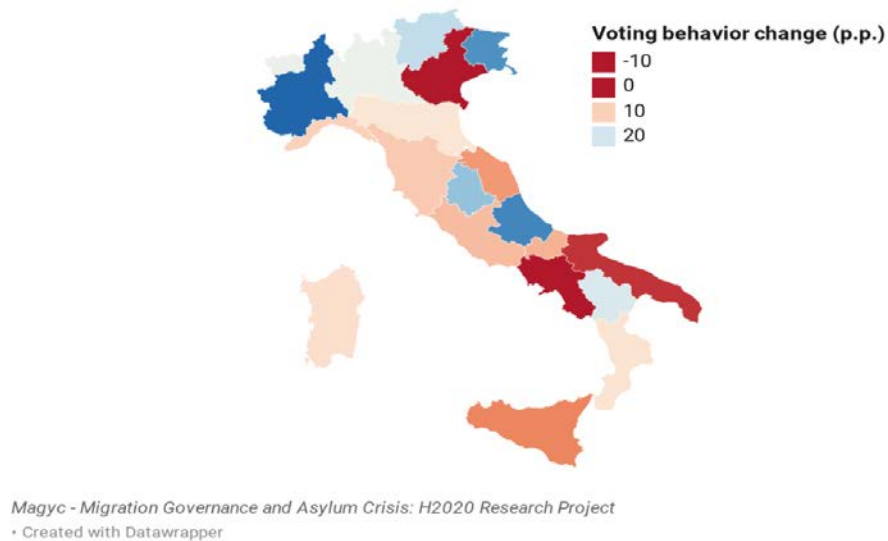
results, no matter what time delay. Election change in percentage points between the first and second rounds of regional elections in Italy is thus depicted in Figure 3.

Figure 2: Italy Regions Map of Asylum Seekers' Sites Increase in Capacity



Source: Authors' elaboration based on data from Siproimi (2019).

Figure 3: Regional Electoral Results for Lega Candidates 2010-2020



Source: Authors' elaboration based on data from Ministero dell'Interno (2020).

Subsequently, the changes in voting behavior and capacity of reception and arrival centers could be statistically analyzed. In order to determine bivariate spatial autocorrelation, we use Moran's I analysis defined as:

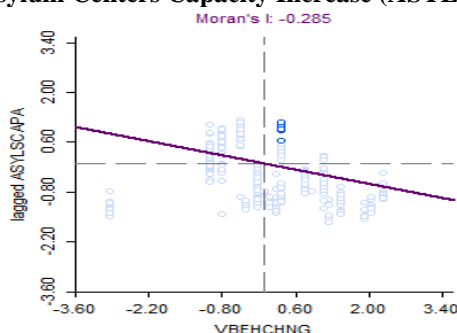
$$I = \frac{N}{\sum_i \sum_j w_{ij}} \frac{\sum_i \sum_j w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\sum_i (x_i - \bar{x})^2} \quad (1)$$

Equation (1) represents bivariate spatial autocorrelation. N represents points of polygons (geographic units), in this case units within Italian regions, \bar{x} is mean of variables, x_i is value at the specific location, x_j is another location, w_{ij} is the weight indexing location of i relative to j (we used "rook contiguity"). Simply, Moran's I analysis creates a spatial matrix of objects (regions within the study country) and measures the degree of relationship between each values of each variable pairs to determine the statistical correlation between them. The potential correlation between the rise of capacity in refugee centers and the Lega electoral success is extended with the possibility to consider the spatial interconnectedness and clustering of the refugee centers in Italian regions. It allows us to compare the spatial proximity among observational units (asylum seekers' sites) and the numeric similarity among their values (voting behavior). Non-randomness and a clustering of similar values will be indicated by a positive spatial autocorrelation. Analysis was processed through GeoDa computer application. All methodology followed the tools usually utilized in papers working with the spatial autocorrelation analyses (e.g. Klos 2008; Bonilla et al. 2009; Saib 2017).

3. Problem Solution

The Moran's I analysis measuring relationship between the original variable – change in voting behavior for Lega between two election rounds (VBEHCHNG) in each region in relation to the spatial lag variable – change in the asylum seekers' sites capacity (ASYLSCAPA), identifies negative spatially autocorrelated areas that have high voting behavior change and at the same time high capacity increase in the region, as well as in the neighboring regions (Figure 4).

Figure 4: Scatter Plot Portraying the Autocorrelation between Voting Behavior Change (VBEHCHNG) and Asylum Centers Capacity Increase (ASYLSCAPA)



Note: The variable on the y axis is the spatial variable (lagged ASYLSCAPA), while that on the x axis is the original variable (VBEHCHNG). The upper right hand quadrant contains Italian regions that are (negatively) spatially autocorrelated.

Source: Authors' elaboration.

The polygons in the upper right hand quadrant are negatively spatially autocorrelated. No positive spatial autocorrelation recorded with Moran's $I < 0$. After this negative results, we are able then to determine, which regions have recorded High-High significance when it comes to increase in VBEHCHNG and ASYLSCAPA. Southern parts of Italy (Figure 5) including regions like Calabria, Basilicata and to a lesser extent Campania evince characteristics of a positive regression even though, spatial autoregression suggests negative cross-regional influences in terms of the rise of far right.

Figure 5: Italian Areas displaying Negative Spatial Autocorrelation Between Far Right Vote % Increase (2010-2020) and Asylum Seekers' Sites Capacity Increase



Note: Out of 852 observations, 238 not significant (utilizing 0,05 significance test). High-High significance present in 104 cases (red clusters). Low-Low in 135 case (dark-blue clusters), Low-High 202 cases (light-blue clusters), High-Low 173 cases (pink clusters). Source: Authors' elaboration.

The results confirming negative spatial autocorrelation suggest that the asylum seekers' sites clustering, in terms of the increase in their capacity following the September of 2015, has no significant impact of the results of the far right. The indication of the positive regression trend between the two variables in the Southern part of Italy is quite logical, taking into account the metamorphosis of Lega from Northern Italian regional movement into the pan-Apennine catch-all party. The simultaneous increase does not necessarily mean empirical causality, what is obvious utilizing statistical methods. Needless to say, all research concerning the linkage between migration and far right parties contains empirical deficiency and it is obvious that the issue of the far right is much more complex. Migration crisis paradigm simply does not work. Numerous other aspects contributing to the rise of far right are more pertinent, thereby narrowing it to the issue of migration is misleading. Post-2008 capitalism, residuals of globalization, malfunctioning monetary policy or right-wing identity-politics are all concepts being contributive to the phenomenon of the Salvini-like populists.

4. Conclusion

This article attempted to make a threefold contribution concerning the issue of the far right and refugee crisis. Firstly, we expressed our stance on the concept of the far right, while demonstrating theoretical intersections between the rise of far right and the refugee crisis. We later justified our choice of picking former Italian secessionist movement called Lega, to be our representative of the far right in Italy. Secondly, a graphic schema of the asylum seekers' sites (reception and arrival centers) was presented. By presenting other data describing the change in voting behavior for Lega between two rounds of regional elections and change in capacity of asylum seekers' sites, we were able to use the spatial autocorrelation analysis (The Moran's I analysis) in order to assess the aim of this paper. The aim of this paper was to assess the impact of the rise of asylum seekers' sites (through the increase in their capacity) on the increase of far right party's election results via a spatial autocorrelation, so that the aspect of regional clustering of refugee centres is analysed. Spatial autocorrelation shows us, to what extent regional clustering of the asylum centres influence the rise in the popularity for Italian far right movement Lega. We recorded negative spatial autocorrelation, with indications of positive regression trends, although very subtle. Thirdly, it is argued that the refugee crisis interpretation of the rise of far right is ambiguous and lacks an empirical foundation. Our research presented herewith did not find any signs of positive spatial correlation in Italy. Some aspects of positive regression were present, although very limited to the Southern part of country. Combined with the absence of relevant data causally linking together rise of far right and refugee crisis in theoretical works we conclude that the migration crisis paradigm is relatively shaky and lacks a firm evidence. This paper represents the first step in dismantling the false migration crisis paradigm when it comes to studies concerning the rise of far right. The lack of empirical proofs is obvious. Future prospects of the research require the extension to other countries of the European Union while preparing more plausible theoretical framework comprising all pertinent dimensions of the rise of far right.

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Control of Concentrations in the EU and the Competitiveness Issue

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Abstract

Merger control in the EU is coming nowadays to the forefront due to criticism, which condemns its strict focus on consumer welfare and the Single market functioning, by which it allegedly hampers the international competitiveness of European businesses. It is pretended that EU-based companies cannot grow enough to compete with the US and Chinese giants of globalized business. Legal and economic science therefore faces the challenge of finding such competitiveness criteria that would be consistent with the objectives of EU competition law. This means that the benefits of increased competitiveness will not be limited to merging undertakings but will benefit the whole industry and its customers or the EU as such. It is therefore the search for a competition-compatible criterion of competitiveness that could reconcile the existing EU antitrust with the proponents of industrial policy based on the success of large companies. The present paper, written from the perspective of a lawyer and an economist, thus contributes to the current discussions on the EU merger control reform and offers its own solutions.

Keywords: competitiveness of European businesses, EU competition law, proposal of merger control reform, single market functioning,

JEL Classification: D21, F23, F61, K21

1. Introduction

The control of concentrations is politically the most sensitive part of the protection of economic competition because of its impact on the structural development of the national (and European) economies. In 2019, the Commission prohibited three mergers (*Wieland/Aurubis*, *Siemens/Alstom*, *Tata Steel/ThyssenKrupp/IV*) and especially that of *Siemens and Alstom* (Commission's decision M.8677 of 06. 02. 2019) triggered a wave of criticism and also of proposals of desirable, and potentially feasible, changes to the Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (EU Merger Regulation – EUMR) and to accompanying soft law (Guidelines – Notices) of the European Commission. „The nature of global competition has changed“, pretend the economic ministers of Germany, France, Italy and Poland in their letter of February 4, 2020 addressed to the European Commission Vice-President and Commissioner for Competition, M. Vestager (Politico, 2020). Based on this assertion, the four big countries of today's EU advocate a rapid change in EU Competition rules and policy in order to boost and not to weaken the chances of European companies to succeed in competition on a global scale.

“We will continue to update our European competition framework to new technological and global market developments”, promised the EU leaders in the New strategic agenda 2019-2024, approved at the European Council's meeting in Brussels on 20 June 2019 (European Council, 2019, p. 4). If, however, the EU competition policy gets subjugated to the interests of

“European champions” disguised under the label of *new industrial policy* (Council, 2019, p. 4), there will be a complete reversal of its priorities. Since its inception, the competition policy preferred the side of buyers to that of sellers / producers, i.e. it has fundamentally put the *democratic* priority of consumer welfare before the *aristocratic* interests of businesses in their market success, size and power. Inherent risk of approving anticompetitive transactions and cause “a downward spiral of economic inefficiency and political arbitrariness” should thus be given due attention when considering any proposal to amend the current legal framework (Szczepański, 2019, p. 26).

Amendments to the control of concentrations regime, that are currently proposed and discussed, are thus of different scope and reach, ranging from politically controversial institutional changes to different assessment standards or updated interpretation of key stones of competition case analysis. The following text focuses on one of them, which is most closely related to the topic of greater competitiveness in the assessment of concentrations.

2. Problem Formulation and Methodology

The most theoretically challenging point of that debate concerns the acceptance of higher competitiveness produced by mergers as a specific “efficiency gain” that could, in a more holistic evaluation of their pros and cons, be considered in favour of their approval by the Commission.

The doctrine of today states the Commission considers only those efficiency gains that are (i) beneficial to consumers (in those relevant markets where there are negative effects of the merger concerned), (ii) merger specific (represent a direct specific consequence of the concentration and are unreachable through means less negative for competition) and are also (iii) objectively verifiable (European Commission, 2004, paras 79-88). These requirements, if taken the last letter, do not make it possible to compensate for the monopolization of markets within the European Economic Area (EEA) by a greater likelihood of the monopolist’s future commercial success in markets outside the EEA, e.g. on the Chinese market. The question, however, is whether a boost of competitiveness, produced by a merger, that brings verifiable benefits not just to merging companies but to the European competitiveness in general, should be included into the evaluation of its effects?

Commission’s Guidelines on the assessment of horizontal mergers explain what kind of efficiencies would be accepted as benefiting consumers. These could be of two kinds: lower prices or other benefits to consumers. Positive future impact on prices should be based on reductions in variable or marginal costs of the merged entity as cost reductions, which merely result from anti-competitive reductions in output, cannot be considered as efficiencies benefiting consumers. Category of *other benefits to consumers* includes new or improved products or services, for instance resulting from efficiency gains in the sphere of R & D and innovation. Both kinds of efficiencies must be real enough in a foreseeable future as the later the efficiencies are expected to materialize in the future, the less weight the Commission assigns to them. Crucial for the competitive edge of a merged entity is that the Commission considers its much bigger size, or excessive market share, to be an obstacle to the efficiencies benefiting consumers. Only the existence of competitive pressure from the remaining firms in the market and from potential entry can guarantee that efficiency gains will be passed to consumers (European Commission, 2019, paras 79-84).

If the increased competitiveness is to become another acceptable efficiency gain, when the effects of a mergers are evaluated, then it would have to be: i) different from the greater competitive potential of the merged entity as such ii) different from the efficiencies already

accepted as beneficial to consumers, iii) not-depending on the decisively increased size (market share) of the merged entity. We are thus looking for a concept of national (European) competitiveness in general increased in a verifiable way, by any controversial merger that comes under assessment by the European Commission.

Mainstream microeconomics offers criteria of efficiency (growth) – and thus competitiveness – of companies where – if this happens – both direct and indirect increase of the so-called consumer surplus can be expected.

The first phenomenon that increases the company's chances of succeeding in the market through higher efficiency is scale economics. This occurs when the growth in the volume of production (services) leads to a decrease in the cost per a production unit. Economics of Scale is in the theory of economics considered one of the basic causes of the natural monopoly. Thus, if a monopoly or dominant company set up in this way is formed by a merger or acquisition, it is reasonable to assume that the increase of efficiency, in the form of unit cost reduction, will partially be reflected in a price reduction (and thus increased sales), while also increasing the absolute profit (volume effect) and the profit margin. It then depends on the price elasticity of demand, which will play a more important role out of the mentioned effects.

Scope economics is the second type of efficiency gain due to growth and mergers, which in theory can also be expected to increase both the profitability of the company and to decrease the price (and increasing the surplus) for consumers. Economics of Scope is based on delivering another type of product (service) to the same consumer group (network).

On the other hand, the third type of efficiency growth, known as the “network effect”, is not based on the possibility of cross-selling, but on the fact that as network utilization increases, the value of its service for each user increases as well.

Empirical research and follow-on theoretical works of Mayer and Ottaviano (Mayer, Ottaviano, 2007), Melitz and Trefler (Melitz, Trefler, 2012) or Bernard, Jensen, Redding and Schott (Bernard, Jensen, Redding, Schott, 2012) convincingly elaborate on the concept of so-called heterogeneity, showing that multinationals compared to companies operating either only on the national market or companies that export but only produce in the domestic economy, reach higher efficiency. By the logic of standard microeconomic efficiency analysis, this must be due to a combination of the above factors. In addition, they show that a low limit number of the largest companies has a decisive share in the production, exports and profits of the given industry. At the same time, these companies typically pay their employees so-called efficiency wages. In part 3, we therefore try to answer the question of how the efficiency of these companies, potentially created by mergers or acquisitions, can ensure the dynamic competitiveness of the EU as one of the centres of economic maturity in the global economy.

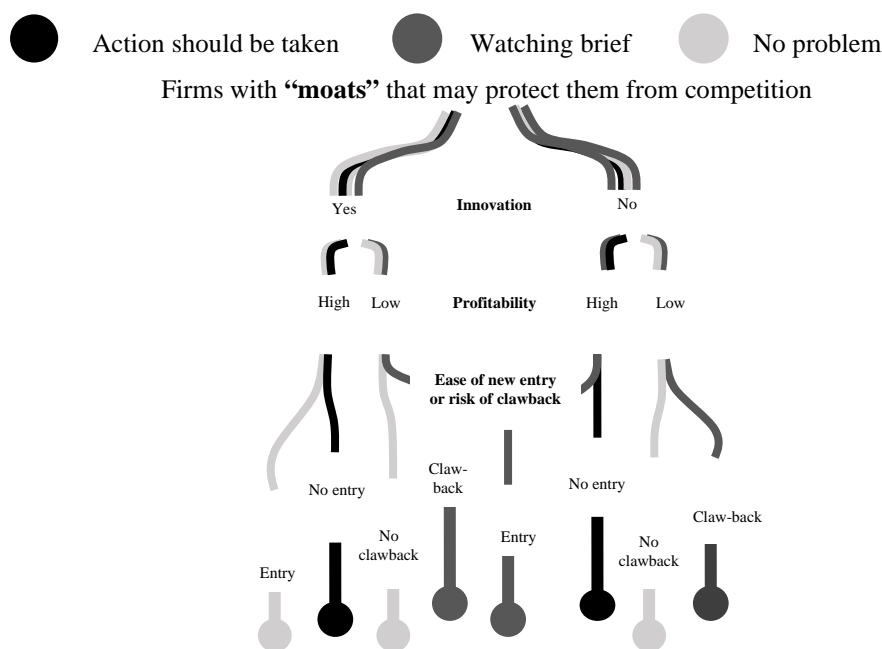
The accompanying phenomenon of market dynamics, discussed in the paragraphs above, is that, empirically, we observe barriers of varying strength to the entry into a concentrated industry, which have a number of different causes. However, certain types of barriers to entry into the industry may also be seen as “competitiveness enhancers”. Therefore, it is necessary to consider how to find the criteria to determine when concentration means or can mean higher competitiveness of the company on the one hand and additional benefit for consumers on the other. (In parallel, we can assume that companies are contestable in the Armentano sense of the word). The taxonomies cited in the next part of the article can be used to find such criteria.

2.1 An (In)complete Taxonomy/ies of the Economic Foundations for Big and Globally Competitive Company

Large companies that are described as current global market winners, are often judged based on their profitability combined with a strong market position. Different taxonomies of these companies can be used to determine which special traits that lead to their dominance in a given market, lead to consumer benefit and which other ones more or less directly increase only their own benefit.

One such taxonomy can be found in The Economist (The Economist, 2018). The taxonomy distinguishes dominant companies based on the following criteria and also defines in which cases it is desirable to exercise “policy action”, “control”, or “supervision”.

Figure 1: How to Identify Where There Is a Competition Problem



Source: The Economist (2018); own elaboration (2020)

The basic criteria for assessing the need of policy action, control or supervision are excessive profit rates along with a barrier to entry into the industry, or even low profit rates along with a major barrier to entry into the industry, which can predict whether or not the company will later behave in a way known as “claw back”, i.e. that after having gained a large part of the market and consumers having no other choice, its prices will jump up which will dramatically change the ration of producer and consumer surplus in the favour of the company.

The implicit statement of the authors is also interesting - this classification does not apply only to innovative companies with disruptive technologies and network effects, but also to companies in more traditional industries.

The author of the second taxonomy is Itzhak Swary (Swary, 2019) although its foundations go deep to the roots of economics and work with the widely used terms such as Economics of Scope, Economics of Scale, Network Effect and the like. However, the classification of the terms within the overall context is valuable in terms of insight and understanding the context.

Figure 2: The View through the Value Drivers

<p>Economies of Scale</p> <p>Sufficient volume of production to massively reduce marginal costs, so the largest player can maintain the best margin of profitability.</p> <p>Operating leverage is becoming an asset in a growth model (disadvantage in a mature company such as offline retailer).</p> <p>The carrot and the stick: growth will create a much bigger boost for earnings. The same is true for the downside.</p>	<p>Economies of Scope</p> <p>Benefits achieved by offering more than one product or service through the same organization, to support the growth model.</p> <p>Enable cross-selling.</p> <p>Double-edged sword – accrue only to companies that identify and capture synergies while simultaneously managing the risk of added cost complexity.</p>
<p>Barriers to entry</p> <p>Mechanism that imposes a cost element on new entrants.</p> <p>Main Sources (natural or artificial):</p> <ul style="list-style-type: none"> ✓ Economies of scale; ✓ Product differentiation (IP); ✓ Capital requirements; ✓ Brand; ✓ Switching costs; ✓ Distribution channels; ✓ Government policy. 	<p>Network effect</p> <p>More usage of the product by any user increases the product's value for other/all users.</p> <p>Generate greater value for the marginal increase in cost – the cost increases but the product value increases more.</p> <p>Value increases exponentially – costs increase linearly.</p> <p>Create network effects by connection platform or content platform.</p>

Source: Swary (2019); own elaboration (2020)

3. Problem Solution

It follows from these theoretical approaches that current economic theory would consider as a verifiable criterion of higher overall competitiveness achieved due to a certain concentration. If the condition of efficiency defined above is to be met, such a newly created company should be able to simultaneously increase sales and at the same time produce higher added value compared to the sum of added value before the merger.

The main advantage of this criterion is that the concept of added value calculates not only the profits, but also the costs of labour incurred in the given period. The concept of analysis using added value is widely used in the research of large multinational companies in a number of industries, on the border between the fields of economics and social geography, and is used for example by Pavlínek and Ženka (Pavlínek, Ženka, 2016).

The added value defined in this manner also has a clear positive impact on the GDP growth of the given economy and if we assume – in line with a number of national competitiveness definitions – that this impact is projected into sustainable welfare growth across the economy, attention must be paid not only to value creation, but also value capture in the given economy. If a merger creates a multinational with a European domicile, it is necessary to ensure not only the value capture in the domestic economy, but also the return of part of the added value from branches abroad. Such behaviour of multinationals is empirically verified and then used to create model behavioural concepts based on the assumption of the so-called “producer currency pricing”, where the mother company is considered the producer. However, the question is whether such behaviour should be guaranteed as the “remedy” prescribed by the competition regulator at the time it approves the merger.

4. Conclusion

We asked the question what the argument for approving mergers stimulating the widely defined growth of competitiveness of the European economy – with an impact not only on producers and employees, but also on other citizens should be. In other words, this means maintaining a dynamic competitive advantage, which is also given by the quality of education, development of research, public investments and other parameters, according to the most commonly used definitions of competitiveness – see for example Šaroč, Šmejkal, Svoboda (Šaroč, Šmejkal, Svoboda 2016, p. 53).

The answer is firstly that the merger must demonstrably meet one or more conditions of economic efficiency growth defined by standard microeconomic approaches and secondly ensure the so-called value capture in the domestic economy and also the influx of a certain part of added value created abroad so that through these, there can be parametric improvements of international public goods and international merit goods, as described in Šaroč, Šmejkal (Šaroč, Šmejkal, 2018, pp. 1462-1463).

Possible remedies to ensure this would be measures for mandatory percentage quotas of repatriation of profits from foreign subsidiaries and further handling of the captured value in the domestic economy. This view deserves further elaboration, in particular using the possibilities of the perspective of the consolidation schemes in International Accounting Standards among others.

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Opinions of Young Farmers on EU's Financial Support

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Abstract

Young farmers are supported by EU's Common Agricultural Policy by complementary direct payments on agricultural land and investment support. The aim of the paper is to assess the opinions of young farmers on this financial aid, whether it is motivating enough to encourage young people to enter the agricultural sector. Respondents assessed the policies on a scale from "certainly motivating" – mark 1, "rather motivating" – mark 2, "rather not" – mark 3, "certainly not" – mark 4 and not applicable – 0. The answers are divided according to the type of the farmer. We received 510 answers in electronic survey. The best evaluated was complementary direct payment with average 2.2. Then RDP investment support was awarded by mark 2.6 and support for start-up from RDP by 2.7. Complementary direct payments were helpful mainly for those who started agricultural activity later than 10 years after studies (2.1). Investment and start-up supports from RDP were evaluated highly by livestock producers (2.5 and 2.6). Less administratively demanding subsidies are appreciated more.

Keywords: agriculture, Rural Development Programme, subsidies, young farmers

JEL Classification: C01, C12, C21

1. Introduction

Generation renewal in agriculture is crucial to sustain the food production, maintenance of the landscape or employment in countryside. The age structure of farmers is not favourable – there are on average only 10.6 % of farmers under 40 years in the European Union (EU) 28 states. In the Czech Republic (CR), there are only 10.2% of young farmers under 40 years that corresponds to the average. Neighbouring states of the CR are in much better situation (Austria (22.2%), Poland (20.3%), Slovakia (19.0%) and Germany (14.7%)). By contrast, the United Kingdom (5.3%), Portugal (4.2%) and Cyprus (3.3%) are in the worst situation.

According to Eurostat (2019), managers in the age group from 55 to 64 years (32%) predominate in the CR. There are even 26.8% of farmers over 65. From 45 to 54 years are 22.1% of them. It means that majority of managers in agricultural holdings are retired or are close to the retirement age.

1.1 Subsidies for Young Farmers from the EU

Because of the unfavourable age structure, young farmers are supported by EU's Common Agricultural Policy. In the first pillar it is by complementary direct payments that are added to the area payment SAPS (Single Area Payment Scheme). Those are entitlements because they are granted to all farmers that fulfil the conditions. Under the second pillar (Rural Development Programme – RDP) there is a measure Setting up of young farmers' businesses in where business plan of young farmer is supported if it is selected in the Call for subsidies. It facilitates "the initial establishment and the structural adjustment of their holding afterwards."

(Kontogeorgos et al, 2014). Besides, it has a wide range of instruments that supports a good environment, improved cooperation between the rural community and the local government, the introduction of new technologies and the internet, increasing the educational level of the rural population, development of tourism, rural culture. (Harakaľová, 2018). “The EU allocated 9.6 billion euro to young farmers in 2007–2020 to foster generational renewal in agriculture.” (European Court of Auditors, 2017). The proposal of the CAP for 2020+ presumes a continuous support of young farmers in height at least up to 2% of finances devoted to direct payments.

Complementary direct payment for young farmers was implemented only in the current programming period and equals to 25% of the average value of the SAPS payment entitlements of young farmer. The rate in 2015 was CZK 885 (25% of SAPS of CZK 3543) and in 2016 CZK 878 (25% of CZK 3514). In 2017, the rate was only CZK 844 per ha, but it increased on CZK 1 694 per ha in 2018 as it could be co-financed from national sources. In 2015, 3 890 of young farmers were supported on 8 475 hectares and in 2016 4 273 on 84 475 ha. The average supported area was 20 ha in both years. It is because the number of hectares that are subject of higher payment is limited – to 90 ha in the CR. (Each Member State could set it according to its needs.) The highest number of applicants has been reached in 2017 (4 289).

Investment support for start-ups of young farmers is provided since the 1980s. In the 2007–2013 programming period, under the RDP measures Start-up of young farmers was approved and reimbursed 1 364 projects in the total value of 94 984 thous. EUR. So far, applications from the RDP 2014–2020 have been received in three rounds (in the 2nd in 2016, in the 4th in 2017 and in the 6th in 2018). In the first round 548 applications were approved and in the second 254 and in the third 312.

Currently, new CAP is being negotiated as same as new Mutual Financial Framework for years 2020–2027 and new measures of agricultural aid are being drafted. There is currently devoted 365 billion euros for both pillars. The allocation for EAFRD is proposed to be 80 037 million euros. Despite that the CAP share will decrease under 30% of the total budget, it is still one of the most important policy together with cohesion policy.

For the purpose of new CAP creation, there has to be done the analysis of the needs and problems of young farmers and generational renewal, so the solutions can be searched and proposed in the CAP Strategic plan. Part of the assessment has to describe the experiences with current CAP measures. Hence, we are concerned with the opinions of young farmers on the CAP support.

1.2 Usefulness and Efficiency of the Subsidies from the EU

It is necessary to examine whether the support is useful and really help young farmers to enter the sector and, more broadly, encourage the generation renewal in agriculture. This question concerned e. g. European Court of Auditors (ECA) (2017) which found out that “this aid is often poorly-defined, with no expected result and impact specified”. They consider complementary direct too standardized and found them not matching young farmers’ needs as they provide only additional income to the farmers. On the other hand, investment support from RDP is better targeted to the farmers’ needs and prompts specific actions, however the managing authorities did not always apply selection procedures to prioritise the best projects. Therefore, the ECA recommends “to better define the objectives and target the EU support in order to foster effective generational renewal.” (ECA, 2017).

Regarding the additional payment Matthews (2013) even proclaim very strong statement that “this payment is the wrong instrument addressing the wrong problem”. He thinks that the problem is elsewhere as there are many financial incentives for farmers to remain farming, and

few to encourage older to leave. He proposes reintroduction of the Early Retirement Scheme. However, there is no clear evidence that this scheme was beneficial when it was in place. Besides, Davis, Caskie and Wallace (2009) found out that there is no significant differences in farmer performance related to age, so the generation renewal on a farm does not necessary have to bring economic effect.

May, Arancibia and Adams (2019) assessed, using a behavioural approach, how complementary direct payment influenced the incentives of young farmers to stay in the farm. Positive influence had “increasing involvement with farm activities and decision making and having more control over the farm in terms of knowing the current situation of the farm positively affect young farmers’ enjoyment at work and allow them to obtain recognition and prestige”. (May, Arancibia and Adams, 2019). Regarding the subsidies, the authors introduced beliefs about policy support (BPS) as exogenous factor that influence farmers’ incentives to leave. This construct consists of two statements, both negatively influencing the incentive to stay: (1) *Agriculture should not need to be supported by public subsidies* – young farmers who agree believe that the sector is not profitable enough to be self-sustained, (2) *Neighbouring farmers could resent the idea of additional subsidy to young farmers*. From this implies that “policies based on payments given to young farmers may not work if they are not aligned with key social and psychological behavioural drivers.” (May, Arancibia and Adams, 2019)

Satisfaction of farmers with their involvement in Young Farmer Scheme was examined in Greece by Kontogeorgos et al. (2014). Their analysis showed that the satisfaction is determined by the responsibility to protect the environment and by the farmers’ awareness that their daily farm practices affect the environment. Hence, this policy measures “could attract to agriculture new entrants that will help to restructure agricultural sector”. (Kontogeorgos et al., 2014). Besides, McDonald et al. (2014) showed that New Entrant Scheme helped the farmers to learn how to formulate business plan that detail “their key targets in establishing and developing dairy farms that would be viable in the forthcoming deregulated dairy regime.” (McDonald et al. 2014).

According to Davis, Caskie and Wallace (2013) New Entrants Scheme has an important impact on farm performance due to its potential dynamic impacts of the farm investments. However, in this measure it is likely that some deadweight can incur in cases where farmers finance from the grant the investments they would have done anyway. They also examined subsidies on the interests of loans for young farmers and they found out that it had significantly bigger impacts.

This financial instrument is considered to be implemented after 2020 also in the CR. According to the proposal of the European Commission’s regulation, those financial instruments can be combined with standard investment grants. In the CR, there are experiences on national level when subsidies for part of the interest on loans granted by commercial entities to agricultural entrepreneurs for investment are financed from national resources and provided through Supporting and Guarantee Agricultural and Forestry Fund.

2. Problem Formulation and Methodology

The aim of the paper is to assess the opinions of young farmers on this financial aid from Common Agricultural Policy, whether it is motivating enough to encourage young people to enter the agricultural sector. We examined complementary direct payments for young farmers and investment grants for the start-up of young farmers. Opinions of the farmers on those policy measures were obtained in primary research.

2.1 Data

An electronic survey by means of structured questionnaire took place in June 2018. We asked over 6 thousand farmers under 40 years of age who have registered land in LPIS. 510 completely completed questionnaires returned, which represents a return rate of about 8.5%. Average age of the respondent was 32.9 years. There were 74.9 % of women. Average size of the farm was 42.4 ha, from which 62.4% was rented (26.4 ha).

Majority of respondents were physical persons (94.7%), others were various forms of legal persons. There were 133 farms with crop production, 175 with livestock and 202 with mixed production. 26.5% farms were managed organically (had certificate of organic farmer). Almost the same proportion of respondents started in the agriculture without any previous background (42.4%) and took it over from parents or relatives (41.8%). 5.1% of respondents inherited the farm from parents or other relatives. The rest bought the farm, partially overtook it, lease it etc. The average length of existence of an enterprise since registration was almost 5 years (4.9). In 29.0% of cases the farm was overtaken from a farmer that was older than 55 years. Over one fifth of respondents (22.9%) started with farming already during studies, 46.1% after school up to 10 years after the graduation. Then 31.0% founded or overtook their farm later than 10 years after finishing schooling.

Regarding the subsidies, over half of the young farmers ever applied for subsidies (52.4%) from the Rural Development Program and 20.8% were considering the application in the future. Only 26.9% have never applied for RDP subsidies and are not ever going to apply. Out of those 267 applicants, 45 did not receive any subsidy at all, i. e. 16.9% of applicants were completely unsuccessful. These 267 applicants applied for subsidies from various programs – both in the past and the current programming period. In total, respondents submitted 370 applications. Thus, on average, one applicant submitted 1.4 applications. The most requested measure from current RDP (programming period 2014–2020) was *6.1.1 Start-up of young farmers* (44.1% of applications). There was also a great interest in *4.1.1 Investments in agricultural activities* (29.5%). In the previous programming period 2007–2013, 17.3% of respondents applied for start-up grant (I.3.2) and 9.2% for *I.1.1 Investment in agricultural activities*. 24 of the 34 respondents received the RDP 2007–2014 subsidy in measure *I.1.1 Investments in agricultural activities*. The success rate was less than 71%. The start-up grants for a young farmer (I.3.2) was then received by 52 applicants and, on the contrary, only 12 were unsuccessful, resulting in a success rate of 81%. For investment measure (4.1.1) in the current programming period, the success rate was lower (78%), as 85 out of 109 farmers received a grant. A higher success rate (80%) was in measure 6.1.1, when the subsidy was received by 131 respondents and 32 did not receive it.

2.2 Methods

In the questionnaire, we asked the respondents about their opinion on the support from the EU currently provided within RDP: (1) measure 6.1.1. Start-up of young farmers, (2) *4.1.1. Investment in agricultural activities*, and from the first pillar (3) *complementary direct payments for young farmers*. The question was: “Do you think that the existing agricultural policy measures are sufficiently motivating for young farmers to start up in agriculture?” The respondents assessed it on a scale: (1) totally agree – 1 point, (2) rather agree – 2 points, (3) rather disagree – 3 points, (4) totally disagree – 4 points, (5) not applicable – 0 points. The answers “not applicable” were omitted from further analysis.

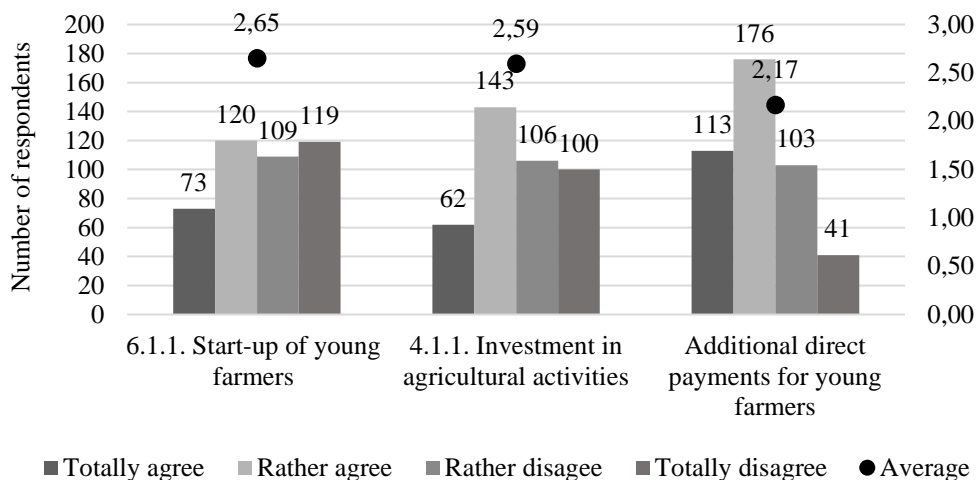
Data were processed by the tools of statistical description. The answers were divided according to the types of farmers: (1) physical or legal person, (2) type of production (crop production,

animal production, mixed production), (3) organic or conventional production, (4) type of starting the business (without any previous background, overtaking from parents or relatives, other types of start), (5) whether the farm was overtaken from a farmer older than 55 years, (6) when the farmer started to work in agriculture (during school, within 1 to 10 years after graduation, later than 10 years after graduation). We used weighted arithmetical mean to calculate average mark for each answer and compared them within the categories. We assumed that for different types of farmers were various supports important differently.

3. Problem Solution

The respondents assessed three types of EU's support. It can be seen from Figure 1 that the most appreciated form of aid altogether were complementary direct payments for young farmers with average mark 2.17. (The lower is the average mark, the better.) The investment in agricultural activities (measure 4.1.1. of current RDP) is valued even higher than specialized measure for start-up of young farmers. It can be due to the fact that the measure 4.1.1. is easier to be administrated. Measure 6.1.1. is conditioned by a business plan that must be fulfilled – investments must be done within 2 years since signing the grant agreement and the plan must be finished in 5 years after the grant agreement. Besides, the projects of young farmers are preferred by preferential points, so they have higher probability of being chosen than the projects other farmers.

Figure 1: Do you Think that the Existing Agricultural Policy Measures are Sufficiently Motivating for young Farmers to Start up in Agriculture? Answers for Each Intervention and Average Mark.



Source: primary survey (2018); own elaboration (2020)

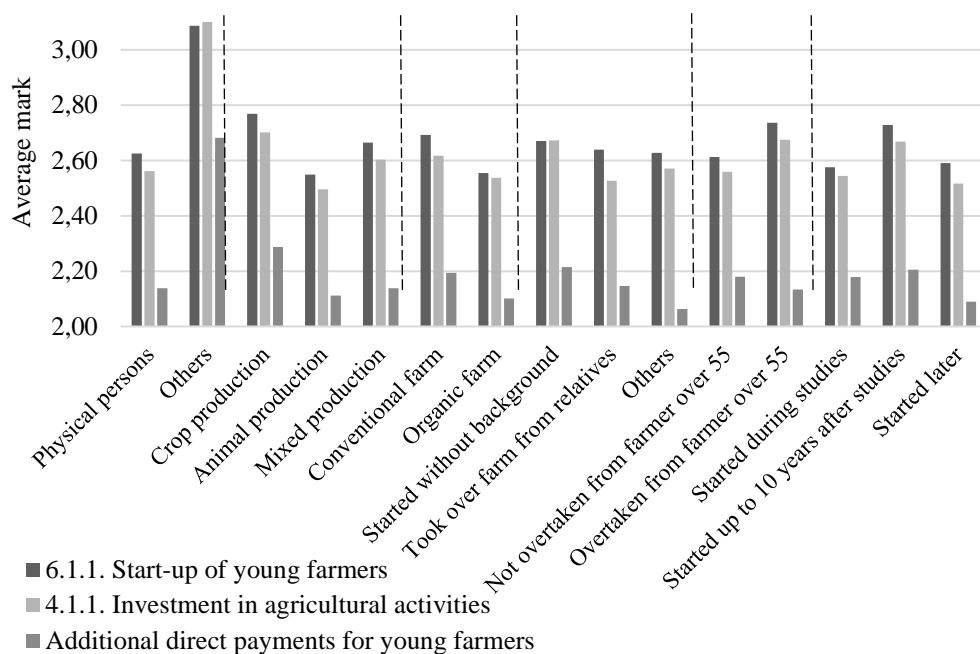
Then average marks were calculated for each group of farmers and displayed at Figure 2. Physical persons considered as the most motivation the complementary direct payment as same as the others. This might be due to the fact that this type of support is entitlement and is easy to be obtained by young farmers. Similarly in case of farms with livestock, mixed and crop production. The rank of the supports was the same, but the best mark was awarded by livestock producers (2.11). Those categories of farmers evaluated with the highest marks also measure 6.1.1 (average mark 2.55) and 4.1.1 (2.50). Farmers farming conventionally appreciated

additional payments and then start-up grants, while organic farmers preferred rather 4.1.1 than 6.1.1.

Those who took the farm from the relatives gave better marks to investments in agricultural activities than those who started agricultural activities without background. It might be due to the fact that this grant is easier to be obtained by already working firms because they have to prove that the investment will be efficient (the payback period of the investment is shorter than is lifetime). This efficiency means that the investment is repaid from its incomes after certain time. (Ministry of Agriculture, 2018). It is relatively administratively demanding to calculate this when no incomes are known yet as the farmer only begins with the activity. Of course, the direct payments as the least demanding are valued the best.

If the farm was overtaken from older farmer (over 55 years), the appreciation of both types of subsidies is lower. Those, who started farming later than 10 years after school appreciated the most investment grant for agricultural activities. On the other hand, for measure Start-up of young farmers was the best average mark awarded by farmers that started their farm already during studies. It helped them probably the most as it is a specialized grant for new entrants.

Figure 2: Do you Think that the Existing Agricultural Policy Measures are Sufficiently Motivating for Young Farmers to Start up in Agriculture? Average Mark for Different Groups.



Source: primary survey (2018); own elaboration (2020)

Complementary direct payments were helpful mainly for those who started agricultural activity later than 10 years after studies (2.1). Investment and start-up supports from RDP were evaluated highly by livestock producers (2.5 and 2.6). It is clearly seen that less administratively demanding subsidies are appreciated more. The lowest marks were given to whole type of subsidies by legal persons, but it might be due to the fact that there were only few of them, then crop producers considered as the least motivating 6.1.1. Start-up of young

farmers (2.77), 4.1.1. Investment in agricultural activities (2.70) and complementary direct payments for young farmers (2.29).

The results have an implication for policymakers. We can conclude that the complementary payment for young farmers seems as the easiest and the most motivational solution to start farming. Based on the research of May, Arancibia and Adams (2019) we can also proclaim that this payment prevent young farmers to leave the farm. However, also social and behavioural aspects must be taken into account as “the young farmer payment was not the strongest factor affecting farmers’ motivations and willingness to leave the farm” (May, Arancibia and Adams, 2019), but also negative opinion of relevant neighbours can influence the decision of the young farmer to stop farming.

4. Conclusion

The age structure of farmers is not favourable in the EU as same as in the Czech Republic, where is only 10.2% of farmers under 40 years. Hence, the generational renewal is supported by EU’s Common Agricultural Policy via the aid granted to young farmers. In the first pillar there are complementary direct payments and under second a measure Setting up of young farmers’ businesses. The aim of the paper was to assess the opinions of young farmers on EU financial support and see, how the opinions differ based on different types of agricultural holdings and various criteria.

Altogether the best evaluated were complementary direct payments (average mark 2.2), then RDP investment support (2.6) and support for start-up from RDP (2.7). It is clear that more motivating are less administratively demanding grants. Further analysis showed that complementary direct payments were helpful mainly for those who started agricultural activity later than 10 years after studies ((average mark was 2.09), for organic farmers (2.10) and livestock producers (2.11). Investment support from RDP where young farmers are favoured was evaluated highly by livestock producers (2.50), by those who started agricultural activity later than 10 years after studies (2.52) and RDP support for start-ups was appreciated the most by a group of farmers with organic type of production, livestock producers (2.55) and those who started their business during studies (2.58).

Nevertheless, average mark over 2 shows that the subsidies are “rather motivating” and not “certainly motivating” factor that influence the start-up of young farmers. It is necessary to take into account other aspects of generational renewal. EU policy focuses only on young farmers nowadays as the early retirement scheme was cancelled. In the CR, there are also, national instruments available. Generation renewal is supported by interest subsidies for young farmers that are provided by PGRLF. Besides, when the farm is transferred from older to young farmer, there is a tax relief (no taxes must be paid). It is questionable whether this support is sufficient as the number of young farmers have been decreasing in recent years. Other motivation than financial must be taken into account. Future research will therefore consider the generation renewal in agriculture in more complex way.

Results of our research can be used to prepare new CAP policy. Currently, there are ongoing negotiation about new EU Multiannual Financial Framework for next seven years where CAP has an important position. Despite that the CAP share will decrease under 30% of the total budget, it is still one of the most important policy together with cohesion policy. Hence, it is important to perform analyses that will question the suitability and efficiency of the CAP. This is also our aim in the future.

Acknowledgements

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Factors Affecting Business Development in Selected EU Countries

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Abstract

Every business activity is influenced by many external and internal factors that influence it more or less. The conditions for business units are usually different from one country to another, and this is either positive or negative for their development. The aim of this paper is to compare the business environment in selected EU countries. The first part of the paper focuses on the comparison of macroeconomic indicators in selected economies. The next part of the article focuses on the basic factors that are considered when starting a business through the Doing Business database and Eurostat. The period analyzed is from 2004 to 2019. Within that period, it is expected that the individual economies of the countries in question have diverse economic performances, which were largely affected by the economic recession in 2009 and 2010.

Keywords: business environment, sourcing sector, economy performance, EU

JEL Classification: H62, M21, O11, O52

1. Introduction

Frequently assume that a favourable business environment is a major development factor (Besley, 2015, Fernández-Serrano and Romero, 2014). One of the most important topics associated with economic development is the question of the easiness of doing business and the factors that decrease or increase the ability to do so (see Fernández-Serrano and Romero, 2014). As a rule, the conditions vary from one country to another, and this is either an advantage or a disadvantage for entrepreneurs in these countries (Sloka et al., 2011). At this moment it is essential to make a distinction to the business environment in individual member states and business environment at European Union level. Each member state offers different conditions for establishing, running as well as funding the start-ups. Therefore at current stage it is not possible to determine one, unified business environment for Europe as a whole (Dziwiński, 2018). The business environment influences the company's decision to invest through channels of equipment upgrades, market entry, and expansion of new activities/markets. Trade regulations are key to the functioning of the private sector. These regulations cover areas such as: creating and expanding business, lending, protecting minority shareholders, enforcing contracts, solving insolvency and foreclosure, paying taxes, compliance costs, predictability and stability of legislation (Economic and Financial Affairs, 2017). These factors can create favourable conditions for investment or discourage potential investors from implementing projects that stimulate their business. These include the business environment, access to production factors, labour market and product market flexibility, and structural changes in the economy. Improving the business environment is still the focus of economic operators and Member State authorities. These are improving the law and public

administration system, law enforcement, creating transparent rules for the tax system and ensuring the stability of principles in trade and investment (Mucha-Leszko and Twarowska, 2018).

Every business subject in a given country strives to be competitive and, above all, to compete with others. Competitiveness is explained as the ability not only to produce goods and services that succeed in the international market, but also to maintain and strengthen a high and sustainable level of economies (Majerová and Nevima, 2016). Competitiveness and its assessment have an important place in the European Union (EU) and worldwide. Effective competitiveness analysis means being based on a defined concept of competitiveness (Nevima and Melecký, 2011). The Global Competitiveness Index (GCI) is primarily used to measure inter-state competitiveness. It is important to point out that a new index calculation methodology was developed in 2005 by Professor Sala-i-Martin and that the concept developed by Sachs and McArthur in 2001 was expanded and deepened. 2007, when compacted economies were cut into completely new categories of development (Majerová, 2019, p. 45). In particular, EU cohesion policy plays an important role in strengthening cohesion and competitiveness at European regional level (Poledníková, 2018).

Within the business environment and competitiveness, it is important to look at macroeconomic indicators that may affect the situation in the economies concerned. One of the most commonly used macroeconomic indicators is gross domestic product. They often form their basis through which other variables are measured, such as the standard of living (GDP per capita), the state of external balance (the current account balance (balance of payments in relation to GDP) or the degree of openness of the economy (export to GDP). As an absolute indicator, it does not have a very high predicative ability, although it is used for international comparison (Majerová, 2019, p. 22). According to Gawel (2010) entrepreneurial activity has a positive impact not only on the level of employment, but also on GDP/capita and export. Country economies depend on certain shocks, which may have some impact on the development of the economy. Economies have always been prone to different types of exogenous shocks that can destabilize the path and structure of economic growth. A disrupted economy can shift to a new path of growth by restoring economic ties, both internally and with other regions (Staničková and Melecký, 2018).

2. Methodology

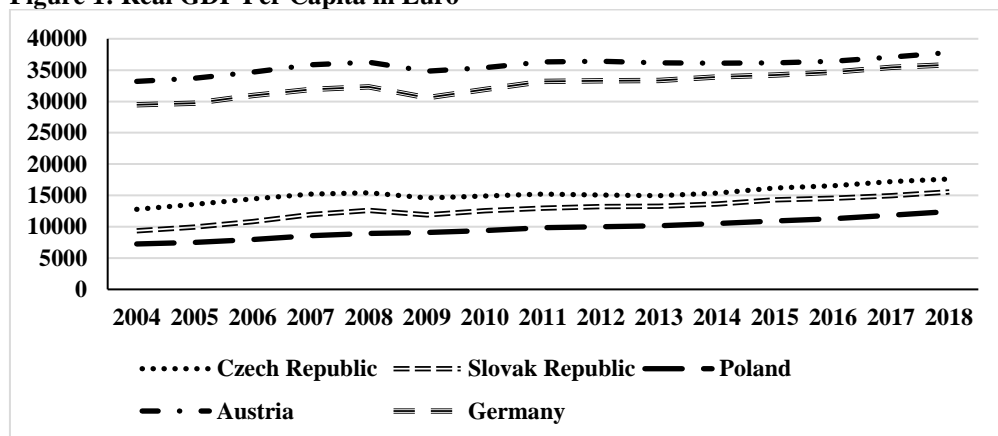
The following chapter will focus on the methodology of the paper. The aim of this paper is to compare the business environment in selected EU countries. The following economies were selected: the Czech Republic, Slovakia, Poland, Austria and Germany. For the purposes of comparing the economies and finding the business environment, the data (secondary data) were obtained through Eurostat and the World Bank (Doing Business). The author of the paper made a comparison based on macroeconomic indicators, which include: real GDP / per capita, real GDP growth rate. According to Majerová (2019, p. 22), economic maturity expressed in terms of gross domestic product per capita and GDP growth are very important indicators of the macroeconomic condition of the economy. Furthermore, the investment of the corporate sector in terms of GDP and the unemployment rate were compared. Within the business environment, the start-up of business and the payment of taxes through Doing Business were compared in the respective economies. Last but not least, the Global Competitiveness Index (GCI) is compared between the above economies.

3. Problem Solution

The third chapter is focused on comparison of individual economies. The first part of this chapter focuses on the comparison of macroeconomic indicators. Another part of the article pays attention to the ranking of countries within the business environment, where factors were selected: starting a business and paying taxes. The last part of this chapter is devoted to the ranking of GCI countries among the respective economies.

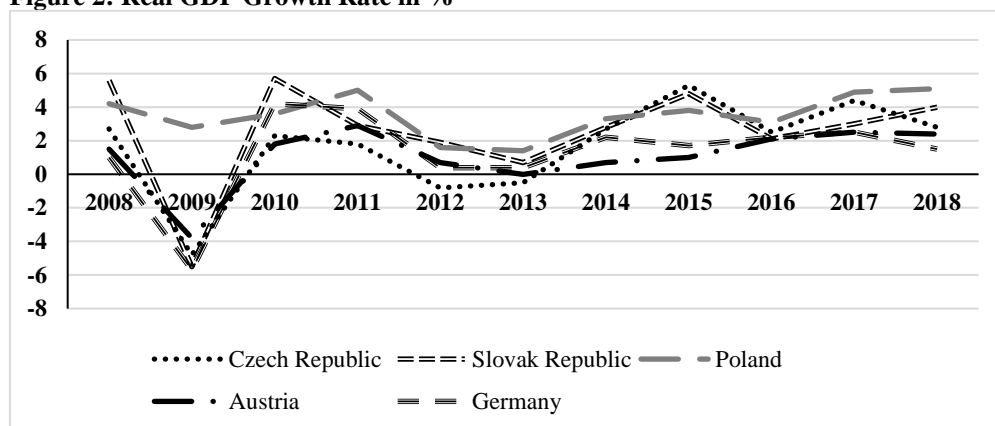
Figure 1 shows the real GDP per capita development in absolute terms (in euros). Real GDP is GDP at constant (comparable) prices, which removes the price effects on the indicator. From the given picture it can be said that the highest values of the indicator were measured in all analyzed years in Austria and subsequently in Germany, which are significantly above the European average. Other countries the Czech Republic, Slovakia and Poland have significantly lower real GDP per capita than the above countries. To more accurately determine the performance of the economy, Figure 2 shows the real GDP growth rate in %.

Figure 1: Real GDP Per Capita in Euro



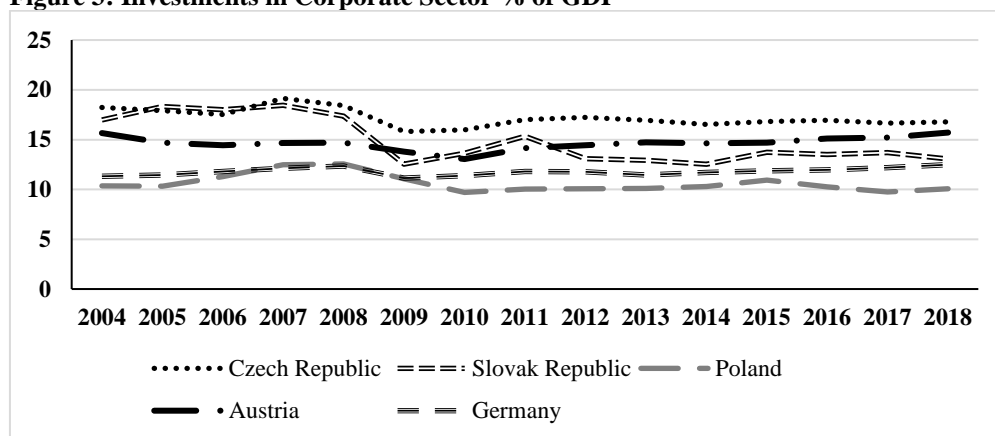
Source: Eurostat (2004-2018); own elaboration (2020)

The next figure (Figure 2) shows real GDP growth as a percentage. All economies except Poland experienced a slump in 2009 due to the economic recession. In recent years, we can see in the given economies predominantly real GDP growth in less developed economies, such as the Czech Republic, Slovakia and Poland. This is mostly the 'catching-up effect', with less developed economies growing significantly faster than the advanced ones and 'catching up' being in economic growth. The causes of faster economic growth in less developed countries may include structural investment changes, policy changes, technological progress, new export opportunities. Between 2017 and 2018, the most significant decrease was recorded in the Czech Republic, namely by 1.6 percentage points. In addition, there was a decline in real growth in Germany and Austria. For economies like Slovakia and Poland, growth is registered, mainly in Slovakia, where the growth was 1.0 percentage point. Given the downward trend in economies, 2020 can be expected to slow the economy and reduce real GDP growth for all of the above economies.

Figure 2: Real GDP Growth Rate in %

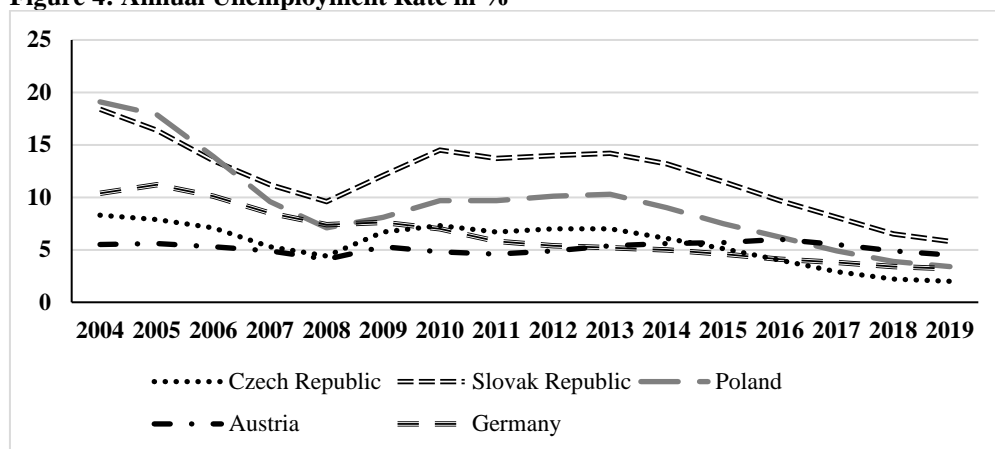
Source: Eurostat (2008-2019); own elaboration (2020)

Figure 3 shows the development of corporate sector investment as a percentage of total GDP. Within this indicator, we can say that the largest percentage of GDP investment in business is predominantly in the Czech Republic in all analyzed years. The second economy that invests in the private sector is Austria and the smallest value of investment in the business sector was mainly analyzed in Poland. When comparing business investment in the last year analyzed (2018), the Czech Republic invests approximately 16.8%, Slovakia 13%, Poland 10%, Austria 15.7% and Germany 12.4% of total GDP.

Figure 3: Investments in Corporate Sector % of GDP

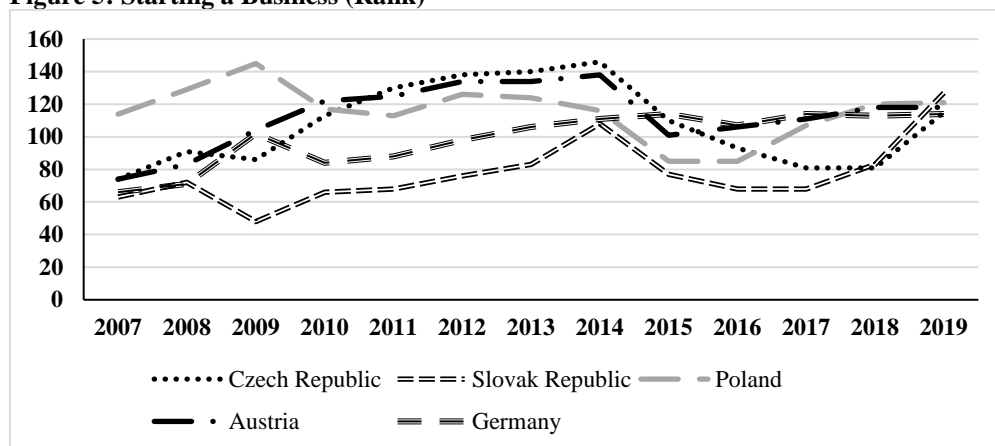
Source: Eurostat (2004-2018); own elaboration (2020)

Another indicator is the unemployment rate expressed as a percentage. It can be seen from the figure (Figure 4) that, before the economic recession, all economies ranged from 4% to 10% within the unemployment rate. With regard to the recession, the unemployment rate in the respective economies has risen mainly in the Slovak Republic and Poland. In recent years, the economies have managed to reduce the unemployment rate to below 10%. Last year analyzed (2019) was favourable in all economies on the development of the unemployment rate, when in the Czech Republic it was registered at 2%, in Germany and Poland around 3% and the highest rate was proven in Slovakia, namely 5.8%. With regard to the development of economies in 2020, the unemployment rate is expected to be higher than in 2019.

Figure 4: Annual Unemployment Rate in %

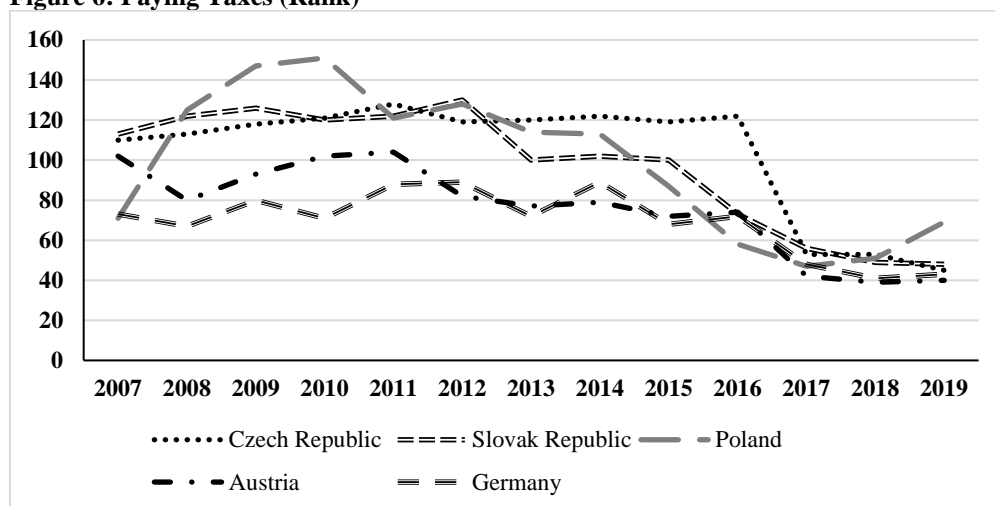
Source: Eurostat (2004-2020); own elaboration (2020)

The next part of this chapter will be devoted to comparing (ranking) countries based on factors that are judged on the basis of the business environment. The first factor to consider is starting a business. It is clear from the figure below (Figure 5) that the order of the individual economies is different over the period analyzed. Slovakia is one of the best-ranking economies in the analyzed period until 2017. In the last analyzed year, Germany and the Czech Republic achieved the best results, ranking 114 and 115 out of all 190 economies analyzed. On the other hand, Poland (121) and Slovakia (127) ranked the most.

Figure 5: Starting a Business (Rank)

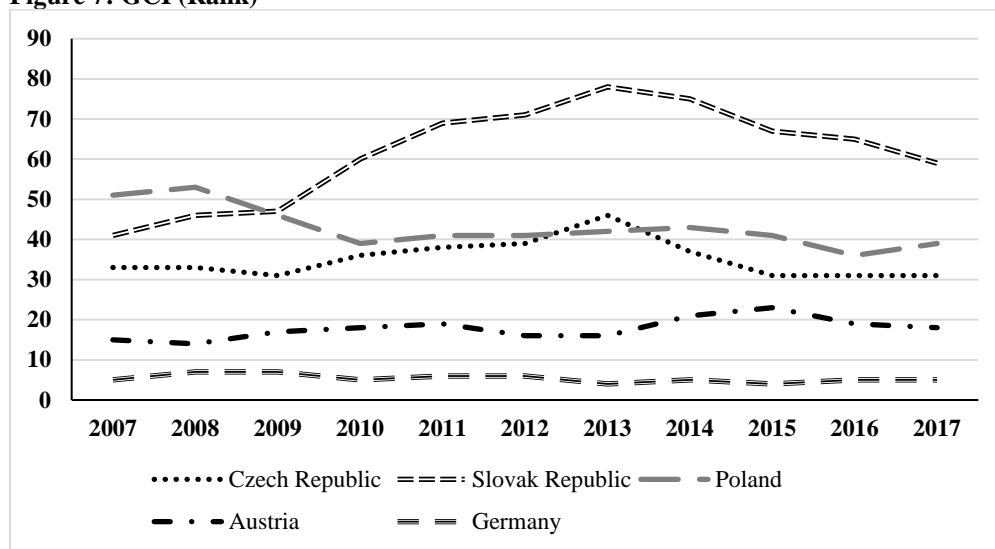
Source: Doing Business (2007-2019); own elaboration (2020)

Figure 6 pays attention to the indicator of paying taxes in given economies. The figure shows that the highest average annual ranking of the respective economies in the whole analyzed period belongs mainly to the Czech Republic and the smallest in Austria. With the economic recession, the country's ranking increased (Poland to 147 and 151 in 2009 and 2010) except Slovakia. The best values for economies were recorded mainly in 2018 and 2019. In the last analyzed year it is evident that the highest ranking of the indicator is in Poland (69), Slovakia (48) and the Czech Republic (45). By contrast, in the year (2019), Germany (43) and Austria (40) rank among the best countries in the ranking.

Figure 6: Paying Taxes (Rank)

Source: Doing Business (2007-2019); own elaboration (2020)

The GCI analyses competitiveness on 12 pillars, which in turn are organized into three sub-indices. 151 countries were examined during the analysis period in the given index, with the lowest ranking of the country being considered the best and the highest ranking of the country being the worst. The highest ranking in the analyzed period is recorded mainly in Slovakia and the best ranking was registered in Austria and Germany. The average evaluation of the analyzed period in given economies was found that the highest ranking was proved in Slovakia (61 place). Poland records the second largest ranking of selected economies based on the average values of the analyzed period, at 43 place. In the Czech Republic, an average rating of 35 was shown in the given period. Much better results were found in Austria and Germany, with an average ranking in 18th place in Austria and Germany in 5th place.

Figure 7: GCI (Rank)

Source: The World Bank (2007-2018); own elaboration (2020)

4. Conclusion

The paper dealt with the comparison of economies within macroeconomic indicators and the business environment. The aim of this paper was to compare the business environment in selected EU countries. Germany and Austria have been shown to be among the strongest economies. Within the macroeconomic indicators, the Czech Republic achieved the best investment share in GDP, but also in the unemployment rate not only from the analyzed economies, but also within the whole EU. To compare the business environment, the author of the article based primarily on values from Doing Business, where he dealt with the ranking of countries for business start-up and tax-paying indicators, where these indicators are considered necessary for decision-making when starting a business in a given economy. Slovakia and Germany are among the best rated countries in terms of starting a business. Among the countries that had the highest ranking are Poland and Austria. Another indicator was the payment of taxes, with Austria, Germany and the highest ranking being the Czech Republic in the analyzed year. Lastly, the paper dealt with comparisons within the GCI index of the competitiveness of the economies, here it was found that Germany has the highest values in the ranking of the other economies in contrast to Slovakia, which had the highest ranking of the economies. The paper shows that there are differences in economies and business environment between the countries of Germany, Austria and the Czech Republic, Slovakia and Poland. The last three economies are trying to support their business activities in these economies, which have a positive effect on economic growth. 2020 will be economically challenging for all, as economies are expected to cool, which may also have an impact on the business environment in those economies. The author will continue to focus on the implications of the cooling economies and their impact on the business environment.

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Population Ageing and Social Security System in the European Union Countries and the Czech Republic

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Abstract

The ageing of Europe's population is a significant structural change for several decades, with appreciable impacts on the economy and social policy in particular. The European Union member states are more concerned with the increase in the number of seniors. The solutions adopted become part of their economic and social policies. Social potential is not only an important part of the nature and potential of human society development, but also one of the fundamental aspects of sustainable development. The aim of the article will be to point out some important moments related to the population ageing of the European Union and at the same time to draw attention to development trends and regional differences. We will take a closer look at the model of social security in the Czechia, where we will focus on selected components of social insurance and state social support due to the deepening process of the ageing of the Czech population. Part of the analysis focuses on the issue of pension system in the Czech Republic and other members of the European Union.

Keywords: population ageing, European Union, social policy, social security, regional disparities

JEL Classification: C46, J11, J13, J14, R23

1. Introduction

Since the creation of the European Union in 1957, it has been one of its key moments of cooperation on the most important policies. Initially, some economic policies were at the forefront: agricultural, energy, trade and transport in particular. Over the past two decades, we have seen a clear interest in unifying practices in the field of social policy. The paper focuses on social security in the context of the deepening ageing process of the European population (Kashnitsky, de Beer, van Wissen, 2020), citizens of the European Union (European Commission, 2014) of its Member States. Further attention will be paid to the ageing of the Czech population and its impact on social security (Šotkovský, 2019).

Regarding the ageing process, we base our analysis on several facts:

- a. A noticeable increase in the oldest citizens in the population,
- b. Extending life expectancy at birth,
- c. Long-term low fertility.

In addition, an increasing number of seniors occur at a time when a significant change in the traditional framework of family coexistence is taking place because of the weakening importance of the family (Poston, Bouvier, 2017). The number of dysfunctional and incomplete families grows. To a large extent, these changes are due to very rapid and profound changes in the economic system of developed countries. The more demanding process of the education system, extending the period of preparation for employment, full employment of women, moving away from the traditional family framework and other moments are behind

the visible growth in the number of individual households. Moreover, all this is happening at a time when we have been dealing with sustainable development issues for more than three decades (WCED, 1987). The three basic pillars of sustainable development are: economic, environmental and social. All three pillars are influenced by human society, especially the economic and social pillars. Our professional interest focuses on the social pillar and its essential aspects, which significantly affect the social security system within the Czech social policy. And, of course, they have an impact on the economic pillar.

The social security system is one of the two decisive elements of the state's social policy. The second part is the area of employment policy. In our analysis we will focus on the area of social security of Czech citizens from the point of view of current and anticipated demographic and economic development. We still live in a world where social differences (Staníčková, 2018) evidently deepen at all levels of spatial order, from the local dimension to the world dimension. To a large extent, this reflects that implementing social policy means being prepared to address their fundamental principles: social justice, social solidarity, participation and subsidiarity. Such high goals can be achieved only in a society not only economically advanced, but above all very democratic. This is far from being the case in the world, and at the global level, sustainable development is still very vulnerable. That is why it is necessary to work very hard on social policy today. This is particularly true for the European Union and essentially for the whole of Europe. This continent is economically very advanced and at the same time it is the furthest in democratizing society. In addition, he is the only one in the role of an ageing continent, in which more seniors aged 65 years and older live than children (0-14 years). This may sound strange at first sight, but ageing is the result of raising the standard of living of citizens in economically highly developed countries. Life expectancy is prolonged, and the health of citizens is improving. Over the last hundred years, the life expectancy of Europe's citizens has basically doubled from over 40 years to over 80 years today. Sustainable development without social justice and solidarity is not possible.

The social security system in terms of legislation in the Czech Republic includes three basic pillars: social insurance, state social support and social assistance. The phenomenon of population ageing in the demographically most developed countries can be described as one of the most serious problems in the next few decades. The social policy of the state will have to deal more and more with issues related to social insurance. An essential part will be to ensure the real functioning of its carrier part, i.e. pension insurance. The general trend is to reduce the social weight of the family and increase the role of the state in the field of state social support. It is clear that the role of social insurance (the first pillar of social policy) and state social support (the second pillar of social policy) is growing in an advanced society.

2. Methodology and Basic Analytical Approaches

Today, most experts underline the fact that the differences between states and regions in all basic areas of life are widening. Similarly, we can document this fact on the ageing process of the world's population (Beard and col., 2011). For an objective assessment of the phenomenon, two basic demographic indicators are sufficient: ageing index and economic support index. Both indexes are widely used as indicators for measuring the effects of population ageing on economic development (Prskawetz, Sambt, 2014). In all cases there are three age groups: children (0-14 years), seniors (65 years and over) and economically active population (25 to 64 years). The ageing index (1) expresses the ratio of the number of elderly persons of an age when they are generally economically inactive to the one hundred number of children:

$${}_tAI = \frac{{}_tP_{65+}}{{}_tP_{0-14}} \cdot 100 \quad (1)$$

The potential support index (2) expresses how many persons in the economically active age fall to one hundred persons in the age 65 and over.

$$PSI = \frac{\tau P_{25-64}}{\tau P_{65+}} \cdot 100 \quad (2)$$

Since we determine the weight of those citizens who, by taxing their wages, contribute to the state budget to ensure the functioning of social policy, we define the economically active age of 25 to 64 years. However, we are aware that in reality there are even fewer of those who pay part of their wages to the state budget. This is due to a number of reasons. The most important can be:

- a. Continuation of young people in education or preparation for employment (retraining, study, etc.) over the age of 25,
- b. Mortality of people under 64 years of age,
- c. Unemployment,
- d. Non-declaration of taxes,
- e. Early retirement,
- f. Systemically given different (most often earlier and unequal gender) retirements,
- g. Health exclusion from work.

As far as the members of the European Union are concerned, the thresholds for retirement pensions are unified by gender. The average age set for Union men is around 65 years and for women a year less. The minimum value is 60 years for women in some EU countries (UK, Austria) and the maximum is 68 years (Denmark) and 67 years (Poland, the Netherlands, Germany, Greece, Italy, Croatia and Sweden). In the Czech Republic, the average length of retirement is almost 25 years. We can thus assume that the average duration of retirement pensions for men and women will be between 20 and 30 years for the EU Member States. All Member States are addressing the issue of shifting the retirement age to at least 65 years. But the exception is no longer the states with the possibility of shifting this age limit to 68 years or more (Ireland, Denmark). High data quality is ensured by the professionalism of the UN Population Division and Eurostat.

3. Population Ageing of European Union

Over the past 70 years, the differences in ageing dynamics at the global level have widened considerably (Table 1). The only continent that has reached the ageing index of 100 is Europe only (2004). This means that there are more elderly people than children. Everywhere else, children prevail in the population quite significantly. In Oceania and North America, children are twice as many as seniors. In South America and Asia, children are more than three times as many as seniors. Africa still has the largest proportion of children. Here, the predominance of children is ten times that of older people aged 65 and over. The current forecasts also assume that these differences will continue to grow until the middle of the 21st century. Europe has thus

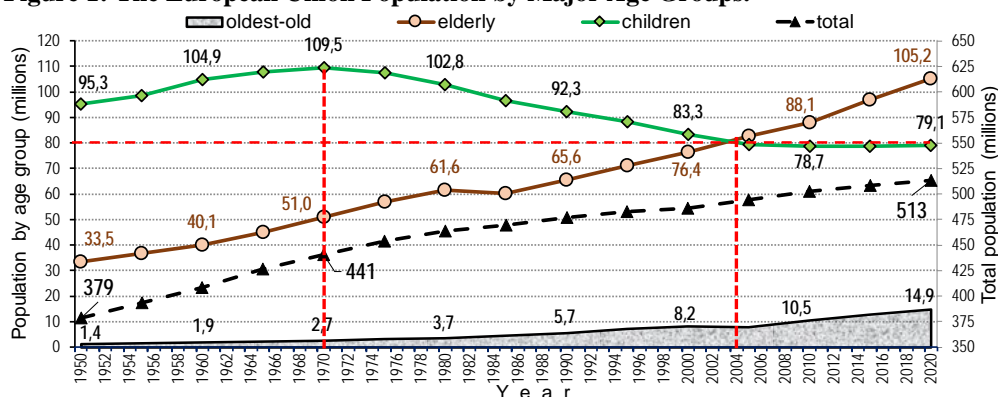
Table 1: Development of the Ageing Index by Continents

Continents	Y e a r						
	1950	1970	1990	2010	2020	2050	2100
Africa	8	7	7	9	9	18	64
Asia	11	10	15	26	38	92	167
Europe	31	41	62	105	119	193	212
South America	9	10	14	26	42	124	233
Oceania	25	22	34	44	54	89	142
North America	19	21	33	45	63	118	192
World	15	14	19	28	37	71	124

Source: own elaboration based on UN data (UN, 2019)

far become the only continent where we can talk not only about the ageing process that has begun (when the ageing index exceeds 50), but about its more pronounced phase called the ageing population (ageing index between 101 and 174). It is therefore a fact that we have more older citizens than children in the population. The ageing process of the 28 EU members is even deeper than for the whole of Europe, which is made up of 44 states. If Europe's ageing index is now 119, then the ageing index for the whole EU population has already exceeded 130. Only North and South America will be added to the European continent in a few decades from the point of view of its ageing population. However, by the end of the 21st century, this group would be expanded to include two more continents (Asia, Oceania). Only Africa will not reach the ageing population with an ageing index of 64 (according to the projection of the middle variant of the UN Population Division).

Figure 1: The European Union Population by Major Age Groups.

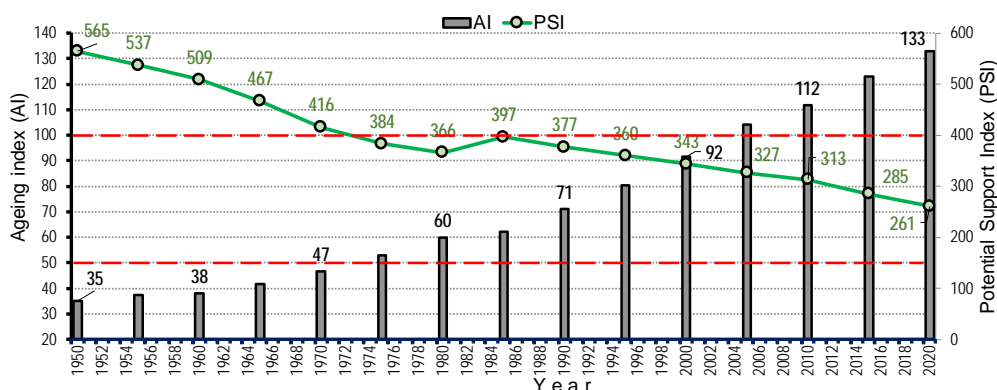


Source: own elaboration based on UN data (1st January, United Nations, 2019)

To assess the basic nature of the ageing of the European Union, we start from the findings of our long-term research. The basic ones include monitoring of the relative representation of children (0 - 14 years) and seniors in the population of EU countries (Šotkovský, 2014, 2017) and their mutual comparison using the age index. Due to the long-term growth of the number of seniors (elderly, older, seniors, 65+) and prolongation of life expectancy, monitoring of representation of the oldest age categories of citizens (85+, 100+) is becoming more and more important. The population of the European Union is ageing in particular by increasing the number of older citizens aged 65 and over. Their relative weight in the EU in 1950 was only 8.8% (33.5 million) and today (2020) is already 20.5%, an increase of almost 72 million. If in the long-term history of the EU the proportion of children has been significantly higher than that of older citizens, then since 2004 there have been more seniors than children (Figure 1). Today, there are more by 26 million. Compared to 1950, when there were almost 62 million more children than seniors, then we have to highlight the profound change in the age composition of EU citizens over the past 70 years. When assessing the number of children on the territory of the European Union in the current spatial delimitation, their number since the peak of the turn of the 1960s and 1970s at the level of less than 110 million decreased to the present by 30 million. Significant increases are seen in the oldest population aged 85 and over, who today make up three percent of the EU population. If there were less than 1.5 million people living in this area in 1950, today the EU has 15 million, or ten times more. Over the same period, the number of seniors aged 65 and over increased from 50 million to more than 105 million today. This is a clear call for the continued development of social security towards the oldest citizens.

The ageing of the EU population can be explained in more detail using the ageing and potential support indexes (Figure 2). If, in the 1950s, the ageing index did not exceed 40, then it has exceeded 100 since 2004. At the moment, there are 133 seniors in every 100 children in the European Union. According to the potential support index, it is clear that the number of economically active individuals per one hundred seniors is significantly decreasing. More than 550 people economically active between the ages of 25 and 64 accounted for every one hundred seniors at the time the European Union was established. Today it is only 261.

Figure 2: The European Union Ageing Index and Potential Support Index

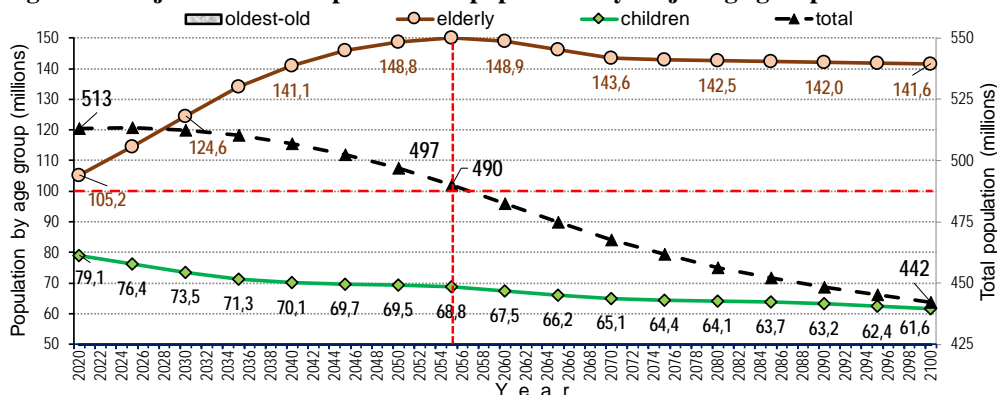


Source: own elaboration based on UN data (1st January, United Nations, 2019)

The weight of economically active persons will continue to decline according to the middle variant of the UN population forecast. In 2100, it could fall below 140. On the other hand, the trend of increasing the index of age will continue to 230 at the end of the 21st century. Europe will also exceed 200 at the age index together with South America. It is certainly interesting to recall some facts from this projection on the European Union itself (Figure 3):

- By 2100, the EU population should decrease by 70 million,
- On the contrary, the number of seniors should increase by 36 million to 142 million,
- Reduce the number of children by a further 17 million to a resultant 62 million,
- Senior citizens are expected to outweigh children by 80 million (18%) by the end of the 21st century.

Figure 3: Projection of European Union population by major age groups



Source: own elaboration based on UN data (1st January, medium fertility variant, UN 2019)

As for the Czech Republic, its present value is 128, a little lower than for the whole Union. The total population should decrease by half a million as well as the index of economic support from today's 274 to 159. The reduction in the number of children is expected at 140 thousand. The number of seniors should increase by one million by the middle of the 21st century and stabilize at the level of 3 million at the end of this century (today 2.1 million people aged 65 and over). Territorial differences of the age index between individual EU members are not statistically significant and among social and economic characteristics we rank these differences into a smaller group of indicators where the differences are decreasing (Šotkovský, 2018). Only three countries have an indicator value of less than 100 (Luxembourg, Cyprus and Ireland). The other 25 Member States reflect the status of a clearly ageing population. Here the differences are slightly larger. On the one hand, there are nine states with an age index of over 140 (Bulgaria, Croatia, Finland, Germany, Greece, Hungary, Italy, Malta and Portugal). On the other hand, we have 5 states with an index value of less than 120 (Belgium, France, Slovakia, Sweden, UK). Thus, the largest group of eleven states, with a value of 120 to 139, is the largest. At the moment, with the exception of Ireland, Cyprus and Luxembourg, the other 25 EU Member States have to deal with the issue of increasing the number of older citizens and give priority to social security. Moreover, according to the forecast, it is expected that by the end of the 21st century, 24 EU states will have over 200. Only 4 states will be exceptions: Luxembourg (185), Czech Republic (194), Denmark (187) and Sweden (196).

4. Social Security System and Pension Policy

The current social policy of our country is based on the social security system and employment measures. The implementation of social policy in the Czech Republic is based on the model of its structural division into two basic areas. The first is social security and the second is resolving employment issues. The practical implementation of a comprehensive package of social affairs is in the diction of the Ministry of Labor and Social Affairs of the Czech Republic (MoLSA). The priority is the area of social security, where everything falls:

- a. Social insurance,
- b. State social support and
- c. Social assistance.

In general, the MoLSA classifies them in the sub-section 'social security benefits and support'. This is the decisive part of this ministry's expenditure, with its weight exceeding 90% in the last decade (over CZK 530 billion in 2018). This group thus accounts for 38 to 42% of the expenditure structure of the state budget. If pension insurance benefits account for 30%, then other benefits of this nature remain between 8 and 12%. Four types of benefits are provided from the basic pension insurance scheme (old-age, disability, widower with widow's and orphan's). The biggest contribution is the old-age pension (81 to 82 percent). By a basic analysis of the development of the number of seniors and the amount and number of pension benefits towards the end of 2018, we find that:

- a. Pensioners in the Czech Republic are more than 800,000 more than seniors aged 65+.
- b. Old-age pensioners are more by 320,000 today than the number of seniors aged 65+.
- c. The difference between the number of old-age pensioners and seniors aged 65+ years has been decreasing since 2011 from the difference of almost 640,000.
- d. The total number of pensions paid is approximately 3.5 million, which is 1.5 million more than the population aged 65 and over.
- e. The absolute amount of expenditures from the state budget on pensions, including old-age pensions, has been increasing in the long-term (CZK 266 billion in 2010 and CZK 351 billion in 2018).

- f. The average amount of old-age pension has increased by almost CZK 2,300 over the past 9 years to its current value of CZK 12,435 (2018).

Old-age pensions can be considered a decisive expenditure from the state budget of each EU member. The basic pension scheme is largely similar. It is the decisive income of an old-age pensioner. The average length of his draw in the Czech Republic today attacks the border of 25 years. The gender gap for this indicator is now almost 9 years in favour of women who on average receive an old-age pension over 28 years (men only 19 years). This disparity has deepened considerably over at least the last two decades. Obviously, retirement pension maxima exceed 50 years and are likely to be reached only by women. These big differences are discouraged by the different and changing conditions for retirement. This causes a decrease in the accuracy of many calculations. For generations born before World War II, retirement was frequent before the age of 55. Today it is not possible to retire before the age of 60. When assessing retirement in the EU Member States, the basic findings are as follows:

- a. No Member State no longer provides a retirement pension before the age of 60,
- b. The current average retirement age in the EU is 63 for women and 65 for men,
- c. Old-age pension is the decisive income of pensioners in the EU,
- d. Retirement pensions will increase by 30 to 40 million by 2100,
- e. Most seniors will be in the EU between 2050 and 2060 (estimated at around 150 million),
- f. The number of economically active (25 to 64 years) will decrease from the current 275 million to 195 million in 2100 and
- g. The potential support index will be reduced from 261 to 138.

5. Conclusion

According to Eurostat and UN forecasts, the number of seniors aged 65 and over in the European Union is expected to increase by more than 40% by the middle of this century. This means absolutely an increase in this age category in the EU of over 40 million. The estimate of the total population of the EU shows a decrease of 20 million.

The increase in the number of seniors in the Czech Republic is very likely to continue for several decades, at least until 2050. Sickness insurance benefits have increased the most in recent years. Pension benefits grow at a rate of less than 3% per year. This necessarily means increasing expenditures in the area of social incomes and social services. If the latest forecasts indicate that there will be a total of 3.2 million old citizens in the Czech Republic between 2050 and 2060, then this would mean that almost 70,000 would live in retirement homes at the current weight of 2.1%. We can assume that the relative representation of seniors in these institutions will grow, mainly due to the breaking of the traditional family framework of coexistence between generations (Káčerová, Mládek, 2012). Only doubling the relative share would mean that the number of people in nursing homes could reach 150,000. Demand for services closely related to the health status of seniors will increase. We know that cooperation on this complex issue is at the very beginning of the two most affected ministries (MoLSA and MoH). Therefore, the ageing process is one of a series of very closely monitored phenomena in the European Union and its Member States. A number of new institutional components for the solution have been added. In the Czech Republic we can include the following activities:

- a. Council of Seniors (RS) of the Czech Republic (since 2005),
- b. Expert Committee for Pension Reform led by its chairman prof. M. Potůček from the Faculty of Social Sciences, Charles University in Prague (2013 to 2017),
- c. The Fair Pensions Commission (since 2019) under the auspices of the MoLSA.

It is very difficult to know the background of the social pillar itself. It is obvious that its functioning is strongly dependent on economic development and further on:

- a. The amount of social insurance as part of social security premiums,
- b. The number of pensions in all types (old-age, disability, survivors),
- c. The cost of administering the pension system.

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Financial Stability of the Company as an Aspect of CSR

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Abstract

The financial stability of the economic area is to be ensured by the national banks of each country and in the EU by the European Central Bank. At the micro level, an independent, relatively closed economic system can be considered an enterprise where financial stability in the short and long term is one of the important aspects of CSR in relation to the surrounding environment as part of the economic system of the state or the EU. It is only after securing CSR in the economic area of a company that it is possible to focus on the fulfillment of CSR in environmental and social areas. The financial stability of a company is one of the important partial objectives of its management and represents a financial balance in terms of both the use of available resources and assets depending on their liquidity. The aim of the paper is to analyze the financial stability of a company in the bank sector as a key element of CSR.

Keywords: companies, corporate social responsibility, financing financial stability

JEL Classification: G32, M14, M40

1. Introduction

Business entities are under constant pressure to take responsibility for solving social problems, such as health crises or environmental degradation (Matten and Crane, 2005; Scherer, Raschle, Palazzo and Spicer, 2016) not only at national level, but in a pan-European dimension of a global character, which we classify as the social responsibility. In today's economic globalization, the concept of the European Union is a unique format for the integration of sovereign Member States in the Community, characterized by the liberalization of capital movements, thereby fostering investment mobility and therefore intensifying the international interest in sustainability of the financial sector as an intermediary of capital in both the EU and the economy of countries. CSR means voluntary efforts by business entities going beyond the normal compliance framework (MacGregor Pelikánová, 2019). It is an increasingly intensive involvement of all key partners in the day-to-day activities of businesses and institutions, enabling them to better anticipate and take advantage of rapidly changing stakeholders' expectations (Turečková, 2015). Raimi (2017) understands social responsibility as an organizational environmental strategy with the aim of preserving the cultural, social and economic aspects of the environment in which a company operates. Kotler and Lee (2005) define the corporate social responsibility as a commitment to improving the company's satisfaction through discretionary business practices and contributions from company sources. The corporate social responsibility is a modern business philosophy whereby a company must, on the one hand, pursue its economic objectives and, on the other, be responsible for the impact on the environment and the quality of life of society (Matysik-Pejas and Horská, 2018). The first introducer of the four types of corporate responsibility was Carroll (1979) who described them as a sustainability or CSR, which include economic, legal, ethical and discretionary obligations.

Although CSR is not mandatory for business entities, more and more managers consider it to be a part of an organizational strategy to ensure a sustainable economic and social development, as competition in national and international markets is accelerating (Androniceanu, 2019). As the question of finding a competitive advantage is becoming increasingly important, CSR should become a priority that will open new opportunities to promote market penetration in these markets (Lovciová, 2018). Given that the growth of social, environmental and economic problems worldwide raises public expectations and the CSR requirements, business entities need to strive to improve the quality of the CSR and find innovative approaches to address socially important issues (Kovban and Kohut, 2019). According to recent studies (Grmelová and Zahradníková, 2019; Dobrovic et al., 2018; Gablas et al., 2018; Kovacs and Kot, 2016) and surveys (Yameen, 2019; Derun and Mysaka, 2018; Meyer and Meyer, 2016) the social responsibility of national and multinational companies is an integral part of their strategies and policies, and at the same time a clearly defined purpose that, once achieved, can bring some economic benefits.

CSR is one of the key issues in the European Union. In 2001, the European Union defined CSR as a voluntary integration of social and environmental aspects into everyday business operations and interactions with business entities (Sýkorová, Kučerová and Blašková, 2015). CSR is based on three basic pillars (social, environmental and economic) that are in line with the triple bottom line system and should be fully respected by business entities (Kunz, 2012). The European Union is a unique economic and political partnership between the 27 countries, which ensures a peace, stability and prosperity on the European continent, contributes to increasing the standard of living of its citizens, has introduced a single European currency and continues to build a single Europe-wide market goods, services and capital among member countries as self-evident as within individual countries (Staníčková and Melecký, 2018).

The free movement of capital contributes to the economic growth by making it possible to invest a capital effectively, while promoting the use of the euro as an international currency, thereby strengthening the European Union's role as a global player. In 1994, the Maastricht Treaty introduced the free movement of capital as a contractual freedom. Under Article 63 of the Treaty on the Functioning of the European Union, all restrictions on the movement of capital between Member States and between Member States and third countries are currently prohibited. Where Member States unduly restrict the movement of capital, the normal infringement procedure shall apply in accordance with Articles 258 to 260 of the Treaty on the Functioning of the European Union. The free movement of capital is closely linked to the European Union's single currency, euro (Seyad, 2016).

A capital is essential in the conduct of business. It can be obtained from own or external resources. Entrepreneurs usually do not have enough own resources, so they must raise capital from an external environment. There are several ways to raise capital from external resources. One of them is to attract foreign investors. Almost all banks in the Slovak Republic have foreign investors, so it is important to focus on the stability of these companies in the terms of the European integration.

The indicators used to assess the optimal structure of capital evaluated the performance of the company. Business performance is a key issue for investors, shareholders as well as for the functioning of the economy (Mardones and Cuneo, 2019). In addition, business performance is a reflection of the company's financial health over a time period (Rumelt, 1991, Tumpach et al., 2015). There is a statistically significant positive relationship between financial performance and CSR, given the importance companies attach to natural resources in their economic activities and to socially responsible activities under the direction of a successful management (Simionescu, 2018). The banking sector is one of the intermediaries of the

movement of capital, which also provides other business entities with access to foreign resources of financing their activities in the whole spectrum of CSR aspects. Since there is a bank between entrepreneurs on the side of capital supply and entrepreneurs on the side of capital demand, its volatility is very important for both sides in terms of a long-term sustainability of the business environment in both Slovakia and the EU. The aim of the paper is to analyze the financial stability of a company in the bank sector as a key element of CSR. The Creditworthiness Index is used to assess banks' financial stability, also with regard to their future financial sustainability, whose main objective is to assess banks' financial situation and assess the risk of bankruptcy.

2. Problem Formulation and Methodology

The aim of a quantitative research conducted on a sample of economic information of commercial banks with legal personality in the Slovak Republic for 2018 is to analyze the financial stability of a company in the bank sector as a key element of CSR. Although commercial banks can be considered as entrepreneurs, they are specific business entities for which specific indicators of optimal capital structure are considered in the financial stability analysis. We will try to identify risk factors based on the assessment of the stability of the banking sector and confirm, respectively refute the hypothesis that the financial stability of banks in Slovakia is good.

Information of active banks with legal personality in Slovakia in 2018 published on the NBS website was a relevant source for selecting specific entities for our research (www.nbs.sk). From the Register of Financial Statements (www.ruz.sk) we obtained the financial statements and annual reports of the relevant banks included in the research sample. The Register of Financial Statements is a publicly available internet resource. From the available financial statement data of Slovak commercial banks, we have filtered the financial statements of the examined banks for the accounting period ending on 31/12/2018 and then selected the items that are relevant to assessing the financial situation of the examined banks.

2.1 Model and Data

For the analysis we will use the Creditworthiness Index or Indicator (CI) (1), which is based on a multivariate discriminatory analysis (Kameníková, 2005) and expresses the relationship of indicators of the financial stability of banks in Slovakia (1): cash flow (CF), foreign capital (FC), total capital (TC), earnings before taxes (EBT), sales (S), inventories (I).

$$CI = 1.5 * \frac{CF}{FC} + 0.08 * \frac{TC}{FC} + 10 * \frac{EBT}{TC} + 5 * \frac{EBT}{S} + 0.3 * \frac{I}{S} + 0.1 * \frac{S}{TC} \quad (1)$$

The higher the value of the Creditworthiness Index the better the financial economic situation of the examined banks (Table 1).

Table 1: Criteria for Evaluation of a Company According to the Creditworthiness Index

Value of CI	Characteristics
CI > 3	extremely good financial situation (creditworthy company)
3 ≥ CI > 2	very good financial situation (creditworthy company)
2 ≥ CI > 1	good financial situation (creditworthy company)
1 ≥ CI > 0	certain problems (gray zone)
0 ≥ CI > -1	bad financial situation (company heading towards bankruptcy)
-1 ≥ CI > -2	very bad financial situation (company heading towards bankruptcy)
CI ≤ -2	extremely bad financial situation (company heading towards bankruptcy)

Source: Sedláček, J. (2008)

3. Problem Solution

As of 31 December 2018, 27 commercial banks operated in Slovakia. Of these 12 commercial banks have their registered offices in Slovakia and the rest are branches of foreign banks (Citibank Europe plc, Fiobanka, a. s., Komerční banka, a. s., UniCredit Bank Czech Republic and Slovakia, a. s., mBank S.A., Raiffeisen Centrobank AG Slovak Branch, BKS Bank AG, BNP PARIBAS PERSONAL FINANCE SA, Československé úvěrní družstvo, COFIDIS SA, COMMERZBANK Aktiengesellschaft, ING Bank N. V., J&T BANKA, a. s., KDB Bank Europe Ltd., Oberbank AG), which were excluded from the analysis because they do not have legal personality in the SR and are not subject to the regulatory provisions of the NBS regarding own resources and property exposure. The basic indicators of the banks included in the research are given in Table 2 (in EUR '000).

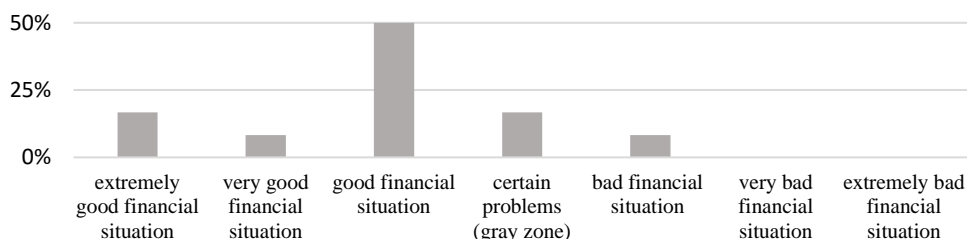
Table 2: Basic Indicators of Banks Included in the Research

Bank Name	CF	FC	TC	EBT	S	CI (%)
Československá obchodná banka, a. s.	223 515	7 720 859	8 506 649	69 214	261 013	1.56
ČSOB stavebná sporiteľňa, a. s.	22 549	226 429	250 776	906	8721	0.80
OTP Banka Slovensko, a. s.	147 981	1 300 221	1 411 793	-4 469	53 275	-0.19
Poštová banka, a. s.	42 338	3 634 196	4 268 030	65 695	219 801	1.77
Prima banka Slovensko, a. s.	119 662	3 273 273	3 600 046	22 114	110 276	1.24
Privatbanka, a. s.	7 832	639 575	83 332	11 334	30 690	3.27
Prvá stavebná sporiteľňa, a. s.	36 565	2 836 412	3 079 793	20 283	119 686	1.02
Slovenská sporiteľňa, a. s.	423 590	14 810 197	16 314 743	214 165	635 400	1.95
Slovenská záručná a rozvojová banka, a. s.	123 515	248 196	547 063	8 770	15 513	3.92
Tatra banka, a. s.	119 759	11 877 246	12 943 559	140 405	446 811	1.79
Všeobecná úverová banka, a. s.	1 278 938	14 760 583	16 369 271	200 308	554 606	2.15
Wüstenrot stavebná sporiteľňa, a. s.	1 161	424 646	472 186	2 210	17 891	0.76

Source: own processing based on the financial statements of examined banks for the period ending on 31/12/2018

The results of the research on the stability of banks according to the CI are summarized in Figure 1.

Figure 1: Financial Situation of Examined Banks in 2018 According to CI



Source: own processing based on the financial statements of examined banks for the period ending on 31/12/2018

Of the examined commercial banks, 50% have a good financial situation (ČSOB, Poštová banka, Prima banka Slovensko, Prvá stavebná sporiteľňa, Slovenská sporiteľňa, Tatra banka), 8% have a very good financial situation (VÚB) and 17% have an extremely good financial situation (Slovenská záručná a rozvojová banka, Privatbanka). 17% of the banks are located in the gray zone, which indicates certain problems (Wüstenrot stavebná sporiteľňa a ČSOB stavebná sporiteľňa). The OTP Banka (8%) has a bad financial situation (Table 2). There are no banks with legal personality in the Slovak Republic in the last two categories with the worst rating according to the CI.

The cause of this bad financial situation in OTP Banka may be the loss reported for the current accounting period, sales, which decreased by 16% compared to the previous accounting period. Nevertheless, OTP Banka does not have any debts or arrears, whether against clients or the state, the tax office and other entities. The Creditworthiness Index was -0.19, which means that OTP Banka is in a situation that is solvable. In case of Wüstenrot stavebná sporiteľňa and ČSOB stavebná sporiteľňa sales decreased compared to the previous period, which means certain problems.

Almost all examined banks in Slovakia have foreign investors. The exceptions are the Slovenská záručná a rozvojová banka and ČSOB stavebná sporiteľňa which are owned by a domestic investor. Slovenská záručná a rozvojová banka has a sole 100% owner, which is the state represented by the Ministry of Finance of the Slovak Republic, and ČSOB stavebná sporiteľňa also has a sole 100% owner, the Československá obchodná banka. Table 3 shows foreign investors with registered office and their share in individual banks.

Table 3: Foreign Investors in Slovak Banks

Bank Name	Foreign investor	Registered office of foreign investor	Share of foreign investor (%)
Československá obchodná banka, a.s.	KBC Bank NV	Belgium	100%
OTP Banka Slovensko, a.s.	OTP Bank Nyrt. Hungary	Hungary	99.44%
Poštová banka, a.s.	J&T FINANCE GROUP SE	Czech Republic	98.46%
Prima banka Slovensko, a.s.	PENTA INVESTMENTS LIMITED	Cyprus	99.31%
Privatbanka, a.s.	PENTA INVESTMENTS LIMITED	Cyprus	100%
Prvá stavebná sporiteľňa, a. s.	Raiffeisen Bausparkassen Holding GmbH	Austria	32.50%
	Bausparkasse Schwäbisch AG	Germany	32.50%
	Erste Group Bank AG	Austria	25.02%
Slovenská sporiteľňa, a.s.	Erste Group Bank AG	Austria	96.92%
Tatra banka, a.s.	Raiffeisen CEE Region Holding GmbH	Austria	89.11%
Všeobecná úverová banka, a.s.	Intesa Sanpaolo Holding International S. A.	Luxemburg	97.03%
Wüstenrot stavebná sporiteľňa, a.s.	Bausparkasse Wüstenrot AG	Austria	100%

Source: own processing based on the financial statements of examined banks for the period ending on 31/12/2018

Out of the examined banks, 3 banks (Československá obchodná banka, Privatbanka and Wüstenrot stavebná sporiteľňa) are 100% foreign owned. In the remaining seven banks (OTP Banka, Poštová banka, Prima banka, Prvá stavebná sporiteľňa, Slovenská sporiteľňa, Tatra

banka a Všeobecná úverová banka), the share of foreign owners ranges from 25,02% to 99.44% (Table 3). All foreign investors come from EU countries, with the most investors coming from Austria (5 banks).

4. Conclusion

Banks fulfill several functions in a market economy, one of which is the intermediation of foreign capital to other business entities. Given that banks in Slovakia have a higher share of foreign owners from the European Union, the banking sector is important for European integration. The aim of the paper was to analyze the financial stability of the company in the bank sector as a key element of CSR. The research was conducted on a sample of commercial banks with legal personality in the Slovak Republic based on the analysis of financial indicators from their financial statements for 2018 and the Creditworthiness Index. Based on the results of the analysis we can confirm the hypothesis that the financial stability of banks is good. From the examined commercial banks 8% (which corresponds to one bank) shows a bad financial situation and 17% is in the gray zone (which corresponds to two banks). The bad financial situation in OTP Banka was due to a loss reported not only for the current but also the immediately preceding accounting period. On the one hand, the loss of the bank decreased by 33% compared to the immediately preceding accounting period, on the other hand its sales decreased with the result that the value of the Creditworthiness Index in that bank indicates a bad financial situation. Slightly better values were reported by Wüstenrot stavebná sporiteľňa and ČSOB stavebná sporiteľňa, which are located in a gray zone indicating certain risks. These risks may also result from a decrease in sales in the current accounting period, even though they made a profit for the 2018 accounting period. These three banks should try to eliminate the problems, increase their sales, reduce costs, attract new clients, maintain their existing market position. The remaining 9 commercial banks are located in categories according to the Creditworthiness Index from extremely good to good financial situation, which unambiguously confirms the good financial stability of the banking sector in Slovakia despite individual risks. Almost all banks dominate the share of foreign ownership over domestic. All foreign owners of Slovak banks come from EU countries. The only exception is Slovenská záručná a rozvojová banka, the sole shareholder and 100% owner of which is the Ministry of Finance of the Slovak Republic and ČSOB stavební spořitelna, which also has the sole 100% owner, the Československá obchodná banka. In conclusion, given the high share of foreign investment in the banking sector in the Slovak Republic, research into their stability and social responsibility is of international importance. Therefore, in future research we will focus on a deeper analysis of financial and non-financial indicators of Slovak banks.

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Is It Really Possible to Move Up in the Global Value Chains? Opportunities in Electromobility and New Modes of Mobility for the Central European Automotive Industry

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Abstract

Technological change is on the way in the automotive industry, which is moving towards electromobility and new modes of mobility. Increasing the share of companies in high value-added sectors and moving up in the global value chains related to technological change is a key for competitiveness. Although researches highlight the limitations of upgrading in Central Europe, the automotive technology change i.e. electromobility and new modes of mobility could create new opportunities for these countries. However, it is not excluded that technological change can conserve current roles of the Central European countries within the global value chain. This paper examines the automotive industry, taking into account the potential outcomes of changes in technology and changes in global production, especially in relation to European production. The focus of this study is a group of Central European countries (Czechia, Hungary, Poland and Slovakia) that play a significant role in the European Union's automotive industry.

Keywords: *automotive industry, Central Europe, electromobility, European Union, global value chain, upgrading*

JEL Classification: *F15, F60, O33*

1. Introduction

Fossil fuel powered road vehicles and related manufacturing developments have been revolutionizing mobility since the first half of the twentieth century. Due to global economic development, with more and more countries entering the group of middle-income economies, an increasing number of people can afford individual mobility. However, the internal combustion powertrain technology is unsustainable in the long run, due to the socio-economic changes which are accompanied by a growing environmental impact such as the increase of greenhouse gas and particulate matter emissions (Túry, 2019). One solution to this is electromobility, which, if generated from electricity from renewable energy sources, can significantly reduce transport emissions.

This technological transformation is underway now, with changes not only in the built-in components of vehicles, but also in the structure of the industry's vertical integration, i.e., in the value chain (Klug, 2014; Ciarapica et al., 2014; Slowik et al., 2016). Technological change will transform the logistics coordination across dispersed plants in the cases of the production of batteries, electric motors and transmissions (Klug, 2014). Production of new generations of main parts like electric motors, batteries, or other power generation units (fuel cells, solar panels) also change the role and scope of suppliers and OEM subsidiaries. Due to new technologies and technological transformation the role of e-drive development companies is

increasing. Because of this there are newly involved independent firms who engage in electric powertrains or drive control. This process affects intra-firm relationships in the automotive value chain with an overall impact on the evolution of their governance structures.

Firstly, we deal with the spread of electromobility, highlighting the structural changes of the automotive value chain. Secondly, in addition to technological developments, we also cover regional trends, especially the consequences for the Central European countries i.e. for Czechia, Hungary, Poland and Slovakia. We summarize the latest technological development in these four countries, how they are moving toward to electromobility.

2. Automotive Industry on the Move to Electromobility

The automotive industry is moving towards electromobility, which creates both challenge and opportunity to the countries involved in the automotive value chain. At the same time, the current global processes for the automotive industry are unpredictable in many respects.

Market developments determine the industry's profitability and the geographic pattern of the global value chain. Although global economic growth forecasts for 2020 were more optimistic than for 2019 (IMF, 2019), the slowdown has stopped and GDP is forecast to improve by 2020. However, for the United States, Japan and China, which are major economic powers in the world, the forecasts are unfavourable.

In addition, there are countless uncertainties that carry negative risks. These include state policies restricting global trade, the United States' 'trade war' with China and the European Union. In the case of the European Union, the risks associated with the United Kingdom's exit from the EU, which, among other things, lead to a deterioration in global value chains, a decline in investor confidence, discourage investment and thus growth. Not only it is affecting the UK, but also other related economies through the global value chain (Somai, 2018). Such tensions, as well as other domestic policy uncertainties, could negatively affect the projected growth of emerging market economies and the euro area as the core of Europe.

But the most important factor determining the prospects of the sector is the full compliance with the obligations, arising from the provisions governing the emission of air pollutants, which causes serious difficulties for manufacturers. In fact, the European Union legislation has introduced significant restrictions on the emission of greenhouse gases from passenger cars (European Commission [online], 2019). Manufacturers are expected to reduce carbon dioxide emissions from passenger cars and vans by 15 percent between 2025 and 2029. The regulation will further tighten from 2030 onwards, from which cars will emit an average of 37.5 percent and 20 percent less carbon dioxide compared to 2021, respectively. Originally, the European Commission planned to introduce a fleet-specific (manufacturer) carbon dioxide emission limit of 95g / km for passenger cars from 2020, but pushed the target date to 2021 in view of the economic environment and allowing pressure from automotive companies (European Commission [online], 2020). As a result of the stricter environmental limits and Volkswagen's 2015 diesel scandal, the state and municipal (city) regulations affecting diesel and gasoline cars have influenced European consumption patterns, with customers changing their long-term choices, that is choosing gasoline cars instead of diesel (Jato, 2019). On the other hand, the regulation not only imposes heavy fines on non-compliant companies (European Commission [online], 2020), it also forces car manufacturers to make significant investments and structural changes (value chain transformation), worsening their profitability prospects.

In addition to the regulation and the macroeconomic outlook, the social impact of transport will force manufacturers to make significant changes in the long term. Increasing urban population and increasing mobility have long had significant social and environmental impacts not only in the developed but also in the developing region (China, India). According to world population projections, the number of people living in cities will increase by 1.5 billion in the next 15 years, and by 3 billion by 2050 (United Nations, 2019). The goal of sustainable urbanization is to maximize the benefits of the agglomeration process while minimizing its disadvantages. Just consider the road network that is unable to handle the increased traffic and the growing amount of time spent in cars (Whitelegg, 1993).

Research on the car of the future highlights new solutions for mobility, most of which involve a radical change in car use and the development of new technologies to facilitate it. Technological developments are fundamentally transforming the services rendered by the vehicle and the revenue generated by the automotive industry. According to a forecast for 2030 (McKinsey, 2016), after-sales services, i.e. maintenance costs, are significantly more weighty than at present, new software updates and other information technology solutions estimated at the average life cycle of a car accounting for one third of the revenue.

KPMG (KPMG, 2019) highlighted vehicle networking, digitalisation and electric drive in the context of automotive transformation. The analysis of the PWC (PWC, 2018) highlights five key features of the car of the future, such as electric; self-driving; community or shared; networked or smart car; and a shortening of previous longer model cycles by one year.

Based on the above-mentioned circumstances, future of the car industry is determined three key factors: *the market trends*, *the tightening of emissions regulations* and *the aim to mitigate the negative social and environmental impacts of increased car use*.

3. Geographic Pattern of Production and the Role of the Central European Countries

Regarding the position of the European semi-periphery regions (Túry, 2019), Southern European and the Central and Eastern European economies, according to Lung (2007) and Pavlínek (2015) the automotive value chain in Europe is characterised by two hierarchical structures. On the one hand, the *assembly-based hierarchy* resulted a centrum-periphery geographical pattern where France and Germany are the core area and the rest of the countries in the European Union (Southern Europe and Central and Eastern Europe) belong to the semi-periphery economies. The upper-class models being assembled in the core countries while mainly the smaller (Subcompact, Compact and Mid-size) vehicles in the periphery. Central European affiliates of the automotive companies have strong linkages to production sites and markets in developed (Western) Europe, addition to the “supply role” of the Central European economies. On the other hand, the *function-based hierarchy* means that strategic functions like R&D centres are concentrated in the home countries of the automotive companies and the supplier as well. Concerning leaving this trap by innovation, Pavlínek (2019, p. 28) noted that this region will continue to attract mostly lower-value-added and labour-intensive production of cars and components, despite the gradual upgrading of its automotive industry.

Central and Eastern European automotive and related industries are able to engage in automotive technology change across the global value chain in three areas: in battery technology, as manufacturing countries, they are not only close to Western European OEMs, but also supply the region’s car manufacturers; in the field of electric vehicles as assemblers; and finally, in the field of new technologies as innovative, high value-added cooperative actors.

3.1. Battery Technologies

On the production side, most of the investments are today in the production of batteries for electric cars. In the European context Central Europe plays an important role. According to forecasts (McKinsey, 2019), with European demand increasing, by 2025 Europe will have significant production capacity in four countries, two of which will be in Central Europe. Poland will play the leading role in the production of about 45 GWh of batteries, followed by Sweden with 32 GWh, Germany with 27 GWh and finally Hungary with 23.5 GWh. The companies meet the increasing demand in Europe, therefore in 2019 many of them announced further developments in order to increase their production. Not only Europe's largest lithium-ion battery factory (Industrial Development Agency [online], 2019), but a significant part of Polish battery production is provided by LGChem's gigafactory near Wroclaw. Therefore, it is understandable that Poland was the biggest exporter of lithium-ion batteries in Europe in the first quarter of 2019 (Energy Reporters [online], 2019). There are other OEMs and suppliers producing batteries for BEVs. For instance, in 2019 Daimler announced that it will build a new factory supplying for its new 'EQ' BEV family. In addition, the Swedish company Northvolt is building its facility in Gdansk. The second biggest production site among the four Visegrad countries is in Hungary. There are three battery manufacturers, the GS Yuasa Corporation of Japan, which has established its first European factory in Miskolc. Samsung SDI from South Korea, which converted and then expanded its existing plant in Göd, and SK Innovation from South Korea, which launched production in Komárom. In Czechia there is only one lithium-ion producer, the US-based A123 Systems manufacturing batteries for BEV in Ostrava. In Slovakia InoBat, together with the automotive supplier Matador and the U.S. company Wildcat Discovery Technologies, announced that they will establish an R&D and production unit (InoBat [online], 2019). This year, the French PSA also announced that batteries for its hybrid and electric cars will start assembling at its Slovakian plant in Trnava (Reuters [online], 2019).

3.2. Assembly of Fully Electric Vehicles

In response to stricter environmental regulations and technological competition, automotive companies are announcing major electric car development for years to come. If we take into account the 50 biggest car makers (relying on OICA's 2017 production figures) there are more than three dozen BEV assembled worldwide. Regarding the global distribution of electric car assembly, beginning of 2020, there are only two BEV that are made in the Visegrad countries. Regulation policies i.e. evolution of vehicle emission regulations, incentives for plug-in and electric vehicles as well as market development have been transforming the global vehicle production in the last ten years. Now China is not only the biggest market, but the biggest producer as well (Lutsey et al., 2018) in terms of ICEVs (internal combustion engine vehicles) and EVs (electric vehicles) – in 2017 50 percent of global production. Thanks to government incentives 14 different Chinese BEV models were made in China. Next to China the EV innovation of South Korean companies is also notable, although the country tends to be more significant in battery production. The remainder of the production is shared by the triad countries, including production and supply capacities in Central Europe. Manufacturers are increasing the number of hybrid and electric models (IEA, 2019). Whereas, according to forecasts (Mosquet et al., 2018), they do not expect to experience a similar growth in the automotive industry to the one that was seen in the early 2000s, and the switch to electromobility will, in any event, be achieved by using existing capacities. However, the geographic pattern of global production will continue to change, as evidenced by expectations of industry experts (KPMG, 2018), which predicted a sharp decline in the global share of Western European automotive production by 2030, from the current 17 percent to 5 percent.

In response to the increasing technological and market challenges, the automotive industry is continuing its consolidation and rationalization, which will bring, on the one hand, further mergers and acquisitions and, on the other hand, an increase in cooperation within the industry (Financial Times [online], 2019). FCA merged with PSA, as well as OEMs making cooperation in order to share their R&D efforts in battery electric and autonomous vehicles (PWC, 2019). Cooperation between battery manufacturers and OEMs has been particularly active lately, with a growing number of manufacturers adopting Tesla's integrated production model of which gigafactories are key elements.

Central Europe has advanced technological achievement in electromobility in public transport. The Poland based company Solaris (owned by the Spanish CAF Group), and the Czech company Skoda Transportation have a long history of cooperation in the field of electric busses and self-propelled trolleybuses manufacturing. In Hungary, serial production is exclusively carried out at BYD Electric Bus & Truck Hungary in Komárom. The factory is the second European manufacturing site alongside the French subsidiary.

3.3. Future Technologies

One of the most important future-oriented directions is the development of driver support systems, autonomous vehicles and information technology systems which provide new features to vehicles and create new forms of mobility, partly in response to the increasing environmental and social impacts of vehicle use (Almeida et al., 2017). Technological change in the automotive industry can have a positive impact on the Central and Eastern European economies. This is confirmed by a study by McKinsey business consulting firm (McKinsey, 2020), which shows the new opportunities for these economies in the technological change. Most importantly, the countries of the region have a strong chance of engaging in higher value-added R&D activities. According to the analysis, automotive software development in Europe will grow by 13 percent over the next five years (2020 to 2025), which will increase the demand for software developers by 6 percent annually. The Central and Eastern European countries can play a role in this growth. Thus, the favourable conditions of the region, such as the available talent pool in engineering and IT business; competitive wages; long experience in automotive manufacturing and R&D; well-developed airport, road, rail and IT infrastructure and government support all contribute to the expansion of higher technology investments. The study also points out that deeper technological integration in the region will also benefit the European car industry.

In the area of new technologies, we can identify three main areas. Autonomous drive software development, which is IT solutions for self-driving systems, as well as smart drives. The second is hardware development for autonomous driving, which means background in mechanical engineering. The third is the infrastructure, which is the vehicle test tracks that play an important role in testing technology.

In the field of autonomous drive software development there are R&D centres in the universities as well as at the OEMs and suppliers. Knorr-Bremse, Continental and Robert Bosch in Budapest, AVL AUTÓKUT in Budapest and Zalaegerszeg have innovation in autonomous driving. There are two Hungarian-based / affiliated companies that show that innovation can successfully integrate into the global value chain. One is the navigation system developer NNG which is now a global player in the field of built-in information technology systems (in-car technologies). The other is Aimotive, which develops self-driving systems based on artificial intelligence, so-called vision first technology. Furthermore, in Czechia, Valeo Research and Development Center in Prague. In Poland Aptiv and Luxoft in Kraków

work on self-driving systems, while in Slovakia Sygic in Bratislava delivers navigation for OEMs.

The autonomous drive hardware development is most often related to software development. Solutions related to self-driving technologies also play an important role in the development, such as the development of a 'smart' electro-mechanical steering servo at Thyssenkrupp's Budapest R&D centre. Electronics and electric motor parts for hybrid cars are manufactured at Continental's Budapest or Thyssenkrupp's Pécs sites or Valeo Research and Development Center in Prague and ZF research centre in Lodz.

As technology advances, there is a growing need for testing developments (including self-conducting technologies). Vehicle test tracks are being built in succession across Europe to provide the widest range of services. Czechia and Hungary are at the forefront. In Czechia there are currently two test tracks, Tatra Test Centre is owned by Tatra truck and Skoda Polygon was built by Skoda auto. A second is being built by BMW for their own use. The Sokolov test track will be opened in 2024. In Hungary, thanks to state development funds, an independent test track (called Zala Zone) is being made available to all manufacturers.

4. Conclusion

Europe's role in the global automotive industry is diminishing. Companies, in the interest of increasing competitiveness and strategy, either re-allocate activities to the countries of the Central and Eastern European region or, in the interest of their own strategy, seek to retain as many activities as possible. This is particularly true for innovation, where work-intensive activities have already been outsourced to the Central and Eastern European region.

For upgrading, so far, we have only seen technological advances in manufacturing, and it should also be noted that in R&D, parent companies carry out the strategic work at the headquarters, only handing over partial tasks to the subsidiaries. There are encouraging signs that the region may be moving away from its previous assembly role in the development of certain technologies. Moreover, there are many positive and innovative examples, mainly in the field of software development, however, the region has not yet fully exploited its innovative potential in human resources. It must be recognized that only by supporting research and development can we get out of the trap we got into from the early nineties. Companies producing for (western) European markets are moving their work-intensive activities to the CEE region for competitiveness reasons. This 'constraint' will be exacerbated by the international environment in the years to come.

Future research on the topic, will be looking at innovation performance of supplier companies that helps existing corporates and new entrants upgrading within the global value chains. In order to analyse this process an enterprise-level investigation will be required.

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Common Transport Policy of European Union and Construction of High-Speed Rail in the Czech Republic

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Abstract

The topic of the paper is the perception of potential benefits of the planned construction of high-speed rail / HSR in the Czech Republic for the competitive and sustainable development of rail transport, with special regard to the current priorities of the Common transport policy of the European Union. In this context, the main attention is paid to the analysis of the impacts of the construction of HSR on the economic and social integration of the relevant regions (with a particular emphasis on the transnational level) and on the environmental component of their development with regard to European ecological framework of Natura 2000. The final part summarizes the basic information related to the implementation of the planned HSR projects.

Keywords: high-speed rail, integration, transport

JEL Classification: L91, L92, R41

1. Introduction

Transport policy together with agricultural, fisheries, commercial and monetary policy belongs to the so-called Common policies of the European Union / EU, which are binding on all member states respectively member states of Eurozone in the case of monetary policy. Its long-term vision, where the introduction of sustainable and innovative modes of transport plays an important role in the EU's energy and climate objectives, is described in the White Paper on Transport (European Commission, 2011). As our society becomes ever more mobile, EU policy supports transport systems which reflect the major future challenges, i.e.:

- congestion - which affects especially road and air traffic,
- sustainability - transport still depends on oil for most of its energy needs, which is environmentally and economically unacceptable,
- air quality – until 2050 the EU want to cut transport emissions by 60 % compared with 1990 level,
- infrastructure - the quality of transport infrastructure is still uneven across the EU,
- competition - the EU's transport sector faces growing competition from fast-developing transport markets in other global regions.

Reflecting the challenges described above, the European Union's Transport Strategy emphasizes four areas of intervention: the internal market, innovation, infrastructure and international aspects. The corresponding objectives are then divided into three thematic groups: urban transport, interurban transport and long-distance transport. It should be noted that the creation of a fully functioning common transport market logically requires the transformation or creation of the relevant legislation.

In this context, it is necessary to mention the Trans-European Transport Network (TEN-T) integrating road, railway, water and aviation infrastructures of the European Union, approved by the European Commission in 1990. This network comprises nine corridors, which are further described with regard to their links to the Czech Republic:

1. *Corridors passing through the Czech Republic:*
The Orient / East-Mediterranean Corridor: Hamburg – Berlin – Dresden – Praha – Brno – Budapest – Timișoara – Sofia – Athens.
The Baltic-Adriatic Corridor: Gdańsk – Warszawa – Katowice – Ostrava – Brno / Bratislava – Wien – Graz – Venetia – Ravenna.
2. *Corridors passing through more than one country bordering the Czech Republic:*
The North Sea-Baltic Corridor: Amsterdam/Bruxelles – Hannover – Berlin – Warszawa – Kaunas – Riga – Tallinn.
The Scandinavian-Mediterranean Corridor: Helsinki – Stockholm/Oslo – København – Berlin – München – Innsbruck – Roma – Napoli.
The Rhine-Danube Corridor: Strasbourg – Frankfurt/M. – München – Wien – Bratislava – Budapest – București.
3. *Corridors passing through one country bordering the Czech Republic:*
The Rhine-Alpine Corridor: Amsterdam/Bruxelles – Köln/R. – Frankfurt/M. – Bern – Milano – Genova.
4. *Other corridors:*
The North Sea-Mediterranean Corridor: Dublin – Liverpool – London – Bruxelles / Amsterdam / Luxembourg – Paris – Marseille.
The Atlantic Corridor: Le Havre – Paris / Strasbourg – Bordeaux – Madrid – Lisboa.
The Mediterranean Corridor: Madrid – Barcelona – Lyon – Torino – Milano – Ljubljana – Zagreb – Budapest.

2. The General Stimuli of the EU Common Transport Policy for the development of Czech railway transport

The main goal of the transformation of Czech transport policy after 1989 was to create conditions for ensuring the quality of transport based on market principles, with an emphasis on its economic, environmental and social impacts. Another objective was to lay realistic foundations for initiating the desired changes in the modal split. These objectives were set primarily in compliance with European policy in response to the declining importance of public passenger and freight transport throughout the European countries in last decades and presented in the so-called White Paper (European Commission, 2001). This book critically depicts the hitherto development of the modal division of transportation performance evolving in favour of modes that have more negative externalities in accordance with the Johannesburg summit on sustainable development, held in 2002. The strategy for sustainable development has become the main pillar for the elaboration of modern policies in many other economic sectors (Ministry of Transport, 2005).

Modal split improvement became the cornerstone of transport policy after the accession of the Czech Republic to the EU. This was aimed especially at transport liberalization (associated with the gradual entry of other companies into the railway market, e. g. Arriva) in the following segments: rail freight transport, rail passenger transport and bus transport. The share of railways in the modal split has significantly dropped from 20 % in 1990 to 6 % in 2004. The lack of competition has been identified as the main reason of low competitiveness of the public transport sector. Over 99% of total service in passenger rail transport and over 94% of the freight rail transport were operated by government incumbent České dráhy / ČD (Czech

Railway Infrastructure Administrator / SŽDC, 2006). The most serious limitations included rigid vertically integrated structure of ČD, high fixed costs, legal requirements for railway operators and external subsidizing without transparent rules resulting in unfair competition (ČD owned whole infrastructure network as well as all essential facilities). Infrastructure access has been charged by the national rail infrastructure administrator from 2003 and the price for access to the railway is set on the basis of the government directive. The total amount of fees varies around 30% of operating costs of the SŽDC and but it still belongs to the lowest in the European Union for passenger trains (SŽDC, Annual report 2006).

Since 2003 the significant institutional changes were initiated, when regional authorities become full-fledged organizers in the field of public transport. As a result, regions have introduced integrated transport systems that have improved the purposeful interconnection of trains, buses and urban transport (Ministry of Transport, 2004). In accordance with the adopted concept, ČD separated the Railway Infrastructure Administration / SŽDC responsible for the maintenance of railway lines and their capacity allocation and ČD remained responsible for railway vehicles and transport services. For upcoming development of the rail sector, it is necessary to implement EU railway packages to the national legislation. The basic principle of legislation contained in relevant packages is to harmonize standards for open access within European countries and to remove secret barriers to entry on relevant markets. The core of this legislation is formed by railway safety directive, railway interoperability directive and open access directive in both freight and passenger transport (European Commission, 2012). In particular, the following measures brought in particular an open access directive, a directive on harmonized licenses for train drivers and a regulation on the rights of rail passengers. Overall, the open access directive, which has guaranteed full free access to rail for all international passenger services within the EU since January 2010, is undoubtedly the most important.

Full liberalization of rail freight transport has gradually started to increase market shares of operators, but despite ongoing liberalization, the main objective has only been partially achieved. According to the available information, there have been 81 freight operators in the Czech Republic in 2013 and 107 in 2019. The low competitiveness of rail transport is due to several main objective reasons (e.g. road operators are not obliged to pay charges for access to rail infrastructure, which significantly reduces their costs). The share of railways in the total traffic flow decreased from 69 % in 1990 to 27 % in 2018 (with a minimum of less than 20% observed in 2006). The liberalization of rail passenger transport in the Czech Republic began in 2011, when RegioJet entered the market, followed one year later by Leo Express. The private market entry has brought significant benefits when the intense price war has reduced average tariffs by 40 % (Tomeš et al., 2016). On the other hand, there was a significant decrease in the average train capacity on the lines concerned. This fact logically reflects the consequences of the price war resulted in all competitor's operation loss (especially in the case of Leo Express). However, the share of rail passenger transport increased from 6 % to 8 % between 2003 and 2018.

3. Regional Impacts of the Construction of High-Speed Rail

One of the undisputed priorities of the above-mentioned Common Transport Policy of the European Union is to support the building of a high-speed rail / HSR network as an important tool for territorial integration at national and transnational hierarchical level contributing to the effective development of a multimodal transport network between urban centres (Kos-Łabędowicz, 2018; Kraft, Vančura, 2010). In this context, the construction of the HSR has a positive impact on increasing the overall competitiveness of the railways against road

transport, which is its main competitor (the other comparative impacts of HSR include the comfort and safety of transport). On the other hand, it is necessary to respect the fact that automobile transport has the general advantage generated by its flexibility (door-to-door transport), which can be only partially eliminated in the case of rail transport by generating economies of scale increasing with transport distances. The corresponding main goal of this article is original evaluation of the potential impacts of the planned construction of Czech HSR with an emphasis on regional integration and environmental quality. The applied methodological approach is based on a comparison of selected factors according to the concerned regions.

From the Czech Republic's point of view, this is primarily the construction of so-called fast connection / FC with relevant links to neighbouring countries (Ministry of Transport, 2017), which, unlike HSR designates new railway lines with an operating speed of 200 or more km/h., also include modernized conventional lines with speeds of 160 to 200 km/h. The construction of FC includes the routes Praha – Brno (cross-border connections → Wien) – Ostrava → Katowice, Praha – Plzeň → München, Praha – Ústí n. L. → Dresden and prospectively Prague → Wrocław (however, its construction is considered unlikely in the next 30 years and has not been included in further research). For further analyses, presented in Tables 1 and 2, the first of the aforementioned FC was divided into the routes Prague – Brno → Wien and Brno – Ostrava (via Přerov) → Katowice and the perception of potential benefits of the northern route was extended to the Praha → Berlin option (strengthening the reflection of the added value of FC from the perspective of the whole EU).

Table 1: Selected data for existing railway routes corresponding to the planned Czech fast connections

planned FC and cross-border connection	total length in km	travel time hours. minutes	number of daily connections	avg. speed km/h Czech part	avg. speed km/h whole route
Praha–Brno→Wien	404	4.04	12	101	99
Praha–Plzeň→München	433	5.35	6	72	78
Praha–Ústí/L.→Dresden	192	2.17	7	81	84
Praha→Berlin	397	4.16	7	81	93
Brno–Ostrava→Katowice	265	4.21	3	73	61

Note: column 5 shows the average speed between starting and ending Czech stations; current data for the Prague-Brno connection refer to the direction via Č. Třebová.

Source: Ministerstvo dopravy (2017), IDOS (2020), own processing.

Table 2: Selected data for existing motorways corresponding to the planned Czech fast connections

highway routes in operation	total length in km	travel time hours. min. (car)	avg. speed in km/h – whole route	time savings in minutes	time savings in %
Praha–Brno→Wien	334	3.20	100	44	18
Praha–Plzeň→München	383	3.42	104	66	34
Praha–Ústí/L.→Dresden	146	1.30	97	47	34
Praha→Berlin	349	3.30	100	46	18
Brno–Ostrava→Katowice	254	2.25	105	116	44

Source: Mapy.cz. (2020), own processing.

Of the planned FCs, the strongest national integration effect can be logically expected from the Prague – Brno route, connecting the two most important metropolises and three mesoregions connected territory of the capital city of Praha and the Central Bohemian region plus the Vysočina region and the South Moravian region and further Brno – Ostrava route, connecting two minor metropolises as well as three mesoregions – the South Moravian, Olomouc and Moravian-Silesian regions (see Viturka, Pařil, 2019). According to estimates of potential travel time savings generated by their predicted speed parameters, these routes take the best position and accordingly the most significant increase in the competitiveness of rail passenger transport compared to the corresponding supply of relevant motorways can most likely be expected (in the case of the first FC route, positive synergies associated with the optimization of rail freight distribution cannot be excluded). In terms of the optimal length of future FC routes, the Prague – Brno route clearly provides the greatest savings, but its routing through Jihlava as the centre of the Vysočina region is complicated by the vertical and horizontal segmentation of the Bohemian-Moravian Highlands with negative impacts on its technical and operational parameters and of course on construction costs. Finally, it is desirable to mention the potential cross-border integration effects where the route Praha – Plzeň → München appears to be the most promising, which will effectively connect the Czech Republic to the highly developed Western European HSR network and, above all, the most important business partner the German Land of Bayern (Šauer, Pařil, Viturka, 2019).

4. Environmental Impacts of the Construction of High-Speed Rail

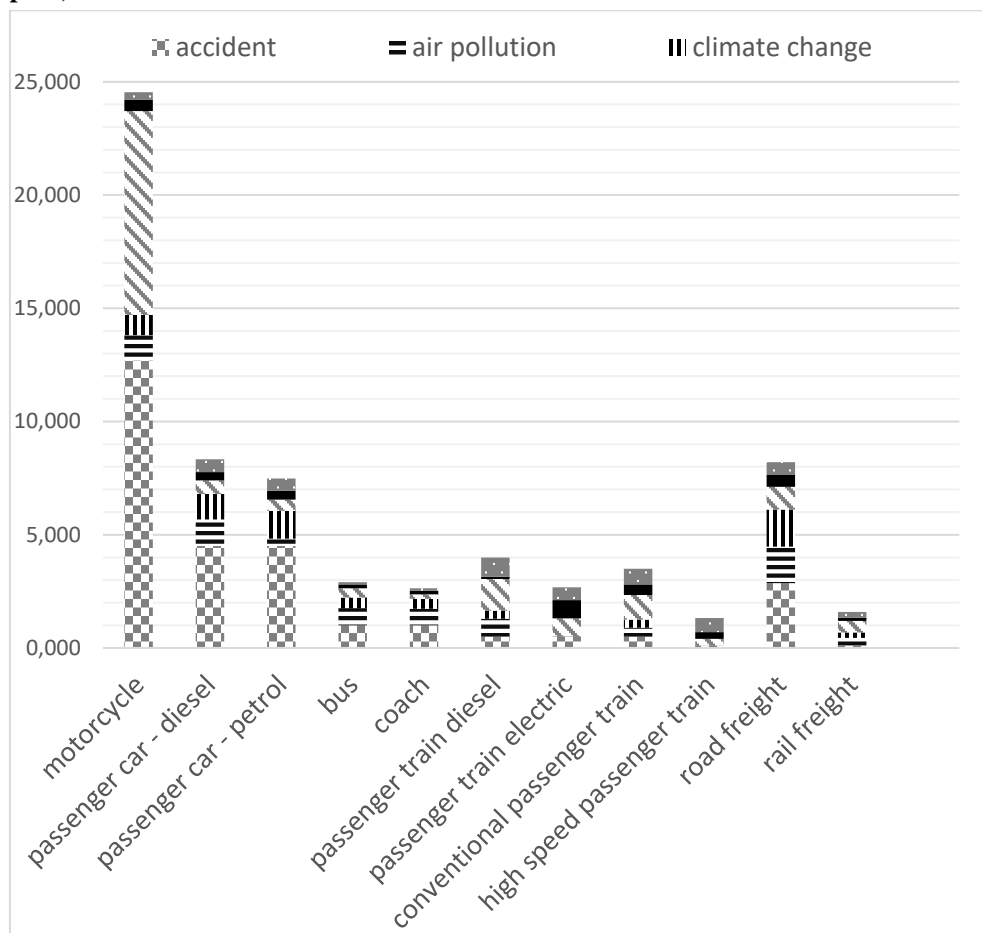
This chapter discusses the general environmental context of transport systems according to globally considered externalities and further analyses HSR / FC conflicts with the well-known European system of Natura 2000. In the following part, there is a comparison of single modes and means of transport according to external costs (primarily environmental). Both passenger and freight transport is included. The method includes following cost components: accidents, air pollution, climate change, noise costs, well-to-tank costs and habitat damage (European Union, 2019). The congestion costs also assessed in the handbook are not included due to their very different character, which does not relate solely to environmental or health damage. A significant result of the comparison is a relatively very low environmental burden given externality costs generated by HSR / FC trains and conventional passenger electric trains compared to other corresponding i.e. competing modes of transport.

Table 3: Transport modes external cost comparison (excluding congestion)

transport mode	milliard EUR	EUR cent per pkm	EUR cent per vkm
	total costs EU28	average costs	average costs
car & moto	620,000	13,457	16,990
bus & coach	20,200	2,765	53,295
train	25,412	2,874	323,996
rail freight	5,640	1,462	720,465
road freight	316,120	8,212	32,018
ship	2,930	1,990	665,569

Note: pkm = passenger km, vkm = vehicle km

Source: European Union (2019), own processing.

Figure 1: Road and rail passenger transport external costs comparison (EUR cent / pkm)

Source: European Union (2019), own processing.

The following part emphasis on the habitat protection according to the EU system Natura 2000. It is a network of nature protection areas made up of Special Areas of Conservation (SAC) and Special Protection Areas (SPA). The SAC is defined by Habitats directive (Council Directive “Conservation of natural habitats and of wild fauna and flora”) and the SPA corresponds with Birds directive (Council directive “Conservation of wild birds”). Achieved results show potential impacts of planned HSR / FC network on at maximum 24 SAC areas and 4 SPA areas (EEA, 2019; ArcData Praha, 2019). The position of routes according to relevant impacts is following: FC1 Praha – Brno – Ostrava → Katowice (28 %), FC4 Praha – Ústí n. L. → Dresden (24%), FC2 Brno – Břeclav → Vienna (22%) and FC3 Praha – Plzeň → München (12 %). In view of total impacts, 1/3 of conflicts concerns SPA and 2/3 concern SAC areas. The most important part of FC1 between Prague and Brno is in conflict only with 2 SAC areas and it is the most environmentally friendly section of all HSR / FC network in the Czech Republic. Corridors with most significant environmental burden are section Prague – Ústí n. L. → Dresden and Brno – Ostrava → Katowice. The direction form Brno to Wien poses a significant burden near to the border SPA sites.

5. Conclusion

Finally, we consider it necessary to state that for the next programming period, the European Commission envisages modernizing cohesion policy, based on five priorities. These priorities can be described as a smarter, greener, social, nearer and more interconnected Europe based on the strategic development of transport and digital networks (European Commission, 2019). The construction of transport networks including HSR has been one of the most serious problems in the Czech Republic, whose successful solution should must be based on professionally choice of relevant priorities limiting politically motivated voluntarist interventions (an eloquent example of this is the project of the Danube - Oder - Elbe water channel). In this context, it is evident that the construction of the HSR network requires significant investment costs for the construction operation and maintenance of infrastructure, which can be effectively ensured through public budgets, including the involvement of EU budget (see Crozet et al., 2014). Regarding the potential sources of financing the planned construction of HSR, we assume that it will be especially the European structural and investment funds and State Fund for Transport Infrastructure. From a methodological point of view the evaluation of big transport projects requires the application of multi-criteria models. This approach creates scope for taking into account the various costs and benefits (including positive and negative externalities) associated with the large transport projects and their long-term use (European Union, 2019). In terms of further research, attention will be focused on other components of the original methodology of multi-criteria project evaluation, i.e. relevance, usefulness and stimulation (Viturka, Pařil, 2015). From a broader perspective, this research contributes to the ongoing discussion within the EU on the methodology and practical application of the tool named Territorial impact assessment.

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The Prospects for Deepening of the European Integration under Conditions of Glocalisation of the World Economy

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Abstract

The article discusses the key trends in the development of the modern world economy in the context of a geo-economic leadership. Glocalisation is identified as a multi-aspect trend that contributes to the formation of new geo-economic centres. The specificity of the modern forms of a geo-economic leadership is analyzed. Special attention is paid to the issue of the European Union transformation under the influence of external and internal factors. The dependence of ensuring European competitiveness in the world economy on the depth of further integration processes is emphasized. The prospects of turning the European Union into a global geo-economic centre of the world economy are evaluated.

Keywords: European integration, geo-economic leadership, global competitiveness, glocalisation, regionalization

JEL Classification: F15, F20, F45, F53, F60

1. Introduction

The current development of the world economic system is characterized by contradictoriness and a high degree of uncertainty in the evolution prospects. On the one hand, the spread of global value chains and the growing information unity of the world in the conditions of digitalization of all aspects of social life is the material basis for the deepening of globalization. On the other hand, information production acts simultaneously as a prerequisite for further deepening the objective foundations of globalisation, and as a factor in the emergence of its new forms, which are externally manifested through the tendencies of fragmentation and partial isolation of production and exchange economic relations.

These general laws are manifested at various levels of functioning of the modern world economic system, including at the level of international integration groups. The European Union, as an integration group that leads the world in terms of quantitative and qualitative parameters of development, inevitably finds itself at the epicentre of global processes and contradictions, and most acutely and vividly embodies the multidirectional trends of increasing internal consolidation of economic processes of global and mega-regional scales, and differences in the economic interests of the main actors in global interactions.

The interaction of internal and external factors and laws of integration development is also gaining key importance today. Its deepening under the influence of internal impulses and potentials for increasing efficiency, and, at the same time, the modification of evolution forms as a result of pressure from external factors is the most important problem of economic theory and practice. Specific forms of deepening integration, as a result of the combination and mutual

influence of these internal and external factors, then turn themselves into a tool that induces new phenomena and mechanisms of interaction at the national, international and global levels.

2. Problem Formulation and Methodology

Trends in fragmentation and regionalisation of the world economy have been discussed recently in the context of the deglobalisation problem (Almeida, 2018; James, 2017). The arguments of the supporters of the deglobalisation are mainly related to the assessment of such phenomena as the slowdown in world trade growth, trade and sanctions wars, the revival of neo-protectionism and the inability of the WTO to counteract these phenomena, anti-globalist declarations and actions of D. Trump, Brexit phenomenon, the strengthening the principle of national-state sovereignty in some countries, the spread of regional separatism and ideas of local identity.

These phenomena do occur to one degree or another, but it would probably not be quite correct to interpret them as deglobalisation. First of all, it should be noted that the volume of world trade has not decreased in recent years – only its growth rate has slightly decreased (3.0% growth in 2018 compared to 4.6% in 2017 – WTO, 2019), so it would be more correct to speak about the slowdown of ongoing globalization, and not about deglobalisation. And most importantly, in the context of information production, the key value is not the volume of trade in tangible goods and traditional services, but the dynamics of global economic information flows, which is characterized by stable and very high growth rates. Over the two decades of the new century, the volume of these flows has grown almost fifty times, many times ahead of the dynamics of trade in traditional goods (Rise of information, 2019). The spread of global value chains, which now cover half of world trade, is also intensifying (World Bank, 2020).

D. Trump's anti-globalist measures are largely due to the desire to implement reindustrialization of the US economy and restore its leading position and competitiveness in the real sector of the world economy. Thus, these measures are caused by global processes and regularities, as well as trade disagreements with the European Union and disputes over the problems of reorganizing the WTO, especially regarding the status and procedure for appointing representatives to appeals instances of this organization in the context of the economic security of states in respect of their deepening global interdependence.

Reflecting the specifics of the current stage and trends in the development of globalisation, the noted phenomena, however, do lead to strengthening the role of local factors of development and functioning of international economic relations. At the same time, local factors can have different scales of implementation - intra-country, national-state, interstate, mega-regional and transcontinental. Differing in scale, they have one common feature - through them, global trends and patterns acquire local concretisation, which, being an objective phenomenon, is reflected in the concept and term "glocalisation". The phenomenon of glocalisation demonstrates that today local social processes cannot have a primary and self-sufficient character (as happened in previous epochs); they inevitably embody and serve as a manifestation of the laws of globalisation, which have acquired a leading and decisive significance. These objective factors are becoming the subject of research on the theory of glocalisation, based on methodological axiomatics and theoretical models of systems approach, global studies, geo-economics, geopolitics, regional studies, and other synthetic social science concepts and approaches in their contemporary concretisation.

One of the most prominent examples of glocalisation has become the phenomenon of neo-protectionism (Fojtková, 2015). Faced with the need to significantly increase the efficiency of the national economy in the conditions of increasing global competition, not only the United

States, but also many other developed countries, including the EU member-states (and, recently, leading new industrial countries) have set the task of reindustrializing their economy. The technological re-equipment of traditional industries and the creation of new ones in accordance with the parameters of “Industry 4.0” and new technological structures required the protection of the domestic market, including protectionist methods, which would seem to be irrevocably overcome and refuted by universally established economic liberalism.

The principles and mechanisms of glocalisation are also clearly visible in the US desire to shift the centre of gravity of international economic relations from multilateral to bilateral agreements. Such an attitude primarily affects the interests of integration groups, which in essence are oriented towards the principle of multilateral cooperation. A manifestation of glocalisation can be considered, for example, the decision of the EU to conclude a separate agreement with Canada (CETA), given the uncertain prospects for the previously discussed much larger TTIP and TAFTA projects.

Along with the multidimensional contradictoriness of the correlation between the mechanisms of multilateral and bilateral agreements, the key problem of the EU's development prospects in the context of glocalisation remains the problem of strengthening its geopolitical status and acquiring this status of adequacy with the geo-economic role of the EU as one of the undisputed leaders of the world economy. Many aspects of this problem have been known for a long time (they have not existed for the first decade), but in the context of glocalisation and the inherent strengthening the role of local factors in the manifestation of global dependencies, the question of the commensurability of the geo-economic and geopolitical functions of the EU becomes sharply urgent. An analysis of the relationship between the economic and political factors of glocalisation implies the need for a comprehensive realization of the potential of the methodology and a meaningful research program of modern international political economy. A study of the synthesis of economic and political aspects of managerial decisions requires concretisation in relation to the practice of functioning governance institutions, which is extremely important both for the EU and other countries of the world, taking into account the uniqueness of the European experience in the formation of supranational governance structures (Navrátil, 2018).

As a cross-cutting methodological approach, modern interpretations of the concept of “economic gravity” are also used, integrating analytical studies of the relationship between the volumetric and quantitative criteria of economic systems, the intensity of trade flows between them and the spatial parameters of their relationships, including with regard to the internal and external economic aspects of the EU activities (Anderson, van Wincoop, 2004; Serlenga, Shin, 2007; Chaney, 2008; Head, Mayer, 2014).

3. Integration Processes in the Context of Glocalisation

Glocalisation phenomena are becoming a focus for the intersection of the objective laws of globalisation and the internal trends of integration processes. Currently, the key factor is the orientation of European countries to achieve world leadership in greening the economy and, in general, the philosophy of sustainable development of society. This most important task is closely connected with the strengthening of the EU geopolitical influence in the system of the modern multipolar world.

3.1 Current Results and Main Directions for Deepening Integration

The final decade has passed for the EU under the sign of the implementation of the “EUROPE 2020” Strategy (European Commission, 2010). As follows from the subtitle of this program document’s title (A Strategy for Smart, Sustainable and Inclusive Growth), the most important goals, against the backdrop of overcoming the consequences of the global financial and economic crisis of 2008-09, were defined as guidelines for sustainable economic growth based on the internal potential of integration, transition to the latest technologies that embody the latest scientific and technical achievements, attributes of the “knowledge society” and a socially-oriented market. These general goals were specified in indicators for key areas such as employment, research and innovation, environmental protection and energy, education, and poverty reduction. In the process of implementing the stated goals, as far as they are adjusted and specified, and especially in connection with solving the problems of reindustrialization, J.C. Juncker in 2014 set the task of mobilizing more than 300 billion euros of additional investment in the real economy over the next three years, which, when the total budget is approaching the amount of about 150 billion euros a year, was a very ambitious and incompletely solved task.

The quantitative parameters of the progress of the main tasks set in the Strategy are represented in table 1.

Table 1: Key performance indicators for the implementation of the “EUROPE 2020” Strategy

	2008	2013	2014	2015	2016	2017	Goal
Percentage of employees aged 20-64, %	70,3	68,4	69,2	70,1	71,1	72,2	75,0
Share of R&D expenditures in GDP, %	1,84	2,02	2,03	2,04	2,03	2,06	3,0
Number of people living below the poverty line, mln.	116,1	121,6	120,8	117,8	116,9	112,8	96,2
Greenhouse gas emissions, 1990=100	90,6	82,4	77,4	78,0	77,6	78,3	80

Source: Eurostat, 2010-2019, author’s composition

Thus, the development of the EU over the past decade has generally followed the guidelines set in the “EUROPE 2020” Strategy, with the most successful results achieved in some aspects of environmental protection (Kondratyeva, 2019). The same direction has been confirmed as a key one for the near and longer term; it is through climate leadership that the local achievements of the EU are expected to be transformed into global competitive advantages.

For the coming five years, the main policy document for deepening integration is becoming “A New Strategic Agenda for the EU, 2019-2024” (European Council, 2019) approved by the European Council. Factors and mechanisms of glocalisation can be traced in all the main directions and targets of the agenda (protecting citizens and freedoms; developing a strong and vibrant economic base; building a climate-neutral, green, fair and social Europe; promoting European interests and values on the global stage). Agenda determines that Europe's competitiveness, prosperity, jobs and role on the global stage all depend on a strong economic base (European Council, 2019).

It can be noted that the very essence of the concept of glocalisation is embodied in the fundamental statement contained in the Agenda: “The EU must be big on big and small on

small". At the same time, deepening internal integration and strengthening the global role, using the opportunities of consolidated synergy of the united countries to implement the geo-economic and geopolitical functions of the EU as a global actor requires to increase its capacity to act independently to safeguard its interests, strengthen its values and way of life, and help shape the global future. As a symptom of fragmentation of foreign economic relations within the process of glocalisation and increasing "closure" of the European market, one can consider decisions to prohibit the acquisition of European companies by monopolistic economic and financial entities from outside the EU and economic agents who receive financial, organizational, information and other support from external States. A reasonable combination of multilateral and bilateral partnerships becomes an important necessity in the context of the approval of globalisation imperatives and similar actions by such global actors, partners and competitors of the EU as the USA and China. At the same time, the fundamental setting formulated by Ursula von der Leyen is provided: "If we are united on the inside, nobody will divide us from the outside" (Von der Leyen, 2019-a).

3.2 Climate Agenda and Energy Policy from the Glocalisation Point of View

The principles of glocalization are most clearly embodied in the fundamental concept of "Green Europe", which is fundamental for today's EU. The common aspiration for climate improvement, uniting and consolidating all countries and the entire territory of the integration group, is at the same time considered as a tool for ensuring its global leadership.

In 2019, global harmful emissions increased by another 1.7%. To prevent global warming from increasing by more than 1.5°C, global emissions must be reduced by 45% by 2030 and reduced to zero by 2050. Solving this complex problem requires significant financial and economic resources: according to the International Energy Agency, it is necessary to double the volume of global investment in clean energy, increasing it to 3.5 trillion dollars per year (Davos, 2020).

Europe is at the forefront of the global environmental movement. The previous guidelines for reduction of harmful emissions by 40% by 2030 were declared insufficient by the European Commission Chairman; this indicator, in her opinion, should be at least 50%, and possibly reach 55%. It is necessary to develop European Climate Law which will set the 2050 target into law. The development of Sustainable Europe Investment Plan involves, in particular, the transformation of the most important divisions of European Investment Bank into a Climate Bank. Over the next decade, this will unlock €1 trillion of investment. Today, a quarter of the EIB loan portfolio is directed at solving climate problems; by 2025, this figure should be doubled. In general, to finance the European Green Deal, climate programs and the creation of climate-neutral Europe, climate-related funding is proposed to be increased to 25% of the EU budget.

Under the influence of the European example, the global financial and banking system, which focuses on the "climate bank" model, is being rebuilt. At the Davos 2020 forum, it was noted that almost three quarters of the world's banks now take environmental risks into account when lending to commercial projects; The IMF considers climate change as a systemic risk and proposes the introduction of a carbon tax with an increase in its rate to \$ 75 / t by 2030. Task Force on Climate-related Financial Disclosures (TCFD) has been established, which in the future will have an increasingly stimulating impact on the global corporate sector in order to promote the growth of the competitiveness of corporations moving to the "zero emissions" business model (Davos, 2020).

A common energy policy and unification of actions to improve energy efficiency are the most important elements of consolidating EU countries' efforts in the climate sphere. The continued local dependence on external energy supplies and the need for their climate-neutral consumption makes the energy problem a key factor in the modern glocalisation mechanism of the EU. In 2019, the concretisation of previous directives on the functioning of energy markets (especially electricity and gas markets) and Energy Union Strategy (Energy Union Strategy, 2016) through "Clean Energy for All Europeans" Package (Clean Energy..., 2019) became a powerful tool for deepening integration in the energy sector. The emphasis in these documents is on stimulating investments in energy efficiency technologies, intensifying the development and use of renewable energy sources and improving the energy infrastructure.

At present, both quantitative and qualitative aspects of deepening European integration in the energy sector have become relevant. In 2019, it was revealed that by 2030 based on national strategies, total greenhouse gas emissions can be reduced by countries by only 28% instead of the 30% planned for the EU as a whole (not to mention the 50-55% target), while the increase in the share of energy consumption from renewable sources will not exceed 30% instead of the planned total of 32%. Even higher is the discrepancy in the generalizing indicator of the overall reduction in energy consumption – in accordance with national strategies, the total energy consumption of countries will decrease by only 26% to the indicated threshold year, while EU directives prescribe a reduction in the corresponding indicator for the integration group as a whole by 32% (Draft national plans..., 2019). M. Arias Cañete, European Commissioner for Energy and Climate, said that the countries of the Union must redouble their efforts to overcome these differences. This should also be facilitated by the decision of the EIB as a "climate Bank" to stop from 2021 financing of any projects involving the use of fossil fuels (while in 2018 about 2.5 billion euros were allocated for such projects).

In the institutional aspect, the deepening of integration in the energy sector is connected, in particular, with the unification of governance mechanisms and powers of national energy regulators, and the correlation of their functions with the prerogatives of national governments. In particular, the EC criticized countries where the energy regulator has no right to make legally binding decisions but can only submit proposals to the government for consideration. According to the EC, it is the energy regulatory agencies that are guided by common European standards, and not the governments, that should also determine the conditions for access to power lines and control the non-discrimination when connecting suppliers to the network.

One should also note the tangible impact of geopolitical factors on the EU's climate and energy policy. Thus, the EC President and the German Chancellor have repeatedly noted in their speeches the inadmissibility of the extraterritorial application of national jurisdictions, and, in particular, the extraterritorial extension of the jurisdiction of external countries to the EU activities in the energy sector.

3.3 Interrelation of Geo-economic and Geopolitical Aspects of the Transformation of the EU's Global Status in the Processes of Glocalisation

The interconnectedness and interdependence of the economic and political aspects of the EU functioning can be traced throughout the history of this integration association's evolution. It is well known that the original integration concept of J. Monnet and J. Schuman was based on the fundamental idea of "cohesion" and interpenetration of the unifying countries' economies as a factor of the fundamental impossibility of their military conflict.

The key direction of the current transformation of the EU's global status is the strengthening of its geopolitical role and the development of this role in the direction which is correspondent

to its geo-economic influence. The specificity of this attitude is the concept of geopolitical “autonomy”, fixed in official documents and detailed in the speeches of EU leaders. More broadly, the global economic influence of the group is seen as an instrument not only of strengthening the political role, but also of the global spread and affirmation of its civilisational values. As U. von der Leyen emphasized, “The world is calling for more Europe. The world needs more Europe...” (Von der Leyen, 2019-a); “I want Europe to strive for more by strengthening our unique brand of responsible global leadership ... Trade is not an end in itself. It is a means to deliver prosperity at home and to export our values across the world” (Von der Leyen, 2019-b). Enhancing foreign policy will require corresponding financial support - it is proposed to increase expenditures for these purposes in the long term by 30% and bring them to the level of €120 billion.

The realities of the modern world are such that political influence, in addition to economic factors, is also based on military potential, especially in the context of adoption of the principle of “cooperation that does not exclude competition”. This is due to the correlation of the concept of “European Defense Union” with the increased military activity of the EU. Success in global competition also depends to a large extent on supporting economic forms of struggle with military arguments. The position of the European Council on Foreign Relations is that “economic power will count for very little if it is not backed by a certain amount of military power... The EU cannot remain dependent on the US for its own protection if it wants to stand firm in an economic conflict with it” (Dullien, 2018). To implement this approach, it is planned to take such measures as the formation of a European army (“not in spite of, but in addition to NATO”), the creation of a European Security Council, development of structures of EU's Common Security and Defense Policy (CSDP) and European Defense Fund, increased participation of European armed forces in direct hostilities in areas of military conflict. The growth of the EU's military ambitions within NATO has been demonstrated by the largest exercise in recent decades, Defender Europe 2020. Investments from the European Space Agency are also multi-functional and should be increased to €14.4 billion by 2025. The main share of investment spending by this organization closely integrated with the EU will be made by Germany (22.9%), France (18.5%) and Italy (15.9%).

The strengthening the EU's geopolitical role can also be seen in the close interconnection of political and economic targets in relations with leading global partners and competitors – the United States and China. For example, the prospects for expanding cooperation with the United States and the favorable terms of new bilateral economic agreements, as well as the principles of the new transatlantic trade partnership, are linked to the requirements of returning to the Paris climate agreement, recognizing the European system for the protection of geographical names of products, coordination with the EU environmental policies and environmental standards, especially in relation to the trade in agricultural products, and excluding genetically modified products from trade. It is also difficult to separate the economic and political aspects in the discussion about the digital tax that the EU intends to impose on Google and Facebook corporations (the decision on this issue was frozen during the negotiations at Davos 2020, but no later than until December this year). The impulses of competition and the potential for conflict are also contained in the currency sphere, which is of particular importance in the context of the predicted probable disintegration of the world monetary and financial sphere into autonomous currency zones as a result of the comprehensive global crisis. Globalisation mechanisms of currency relations continue to have a significant impact on the structure and dynamics of trade flows.

At the same time, within the framework of the “geo-economic triangle”, global cooperation and competition between the three economic superpowers of the modern world, the EU and the US act as allies in competition with the Chinese economic model. In this case, economic

rivalry also has an obvious geopolitical aspect, which makes the current EU administration emphasize its simultaneously pro-European and pro-Atlantic position. Economic negotiations and agreements with China are traditionally supported by declarations about the coincidence or closeness of approaches to such global problems as the fight against negative climate change, terrorism and extremism, the proliferation of nuclear weapons, poverty and inequality; joint desire of the parties for a peaceful resolution of regional conflicts is noted (EU-China..., 2020). At the same time, the issues of cybersecurity, respect for human rights, national and religious minorities, and the growth of China's military activity remain the objects of disagreement. During 2019, economic and political compromises were achieved on issues such as China's fundamental agreement to waive the requirement of mandatory technology transfer as a condition for European firms' access to the Chinese market, permit Chinese companies to access the construction of European 5G networks, and canceling the requirements of Chinese legislation for these companies to transfer commercial and other information they receive to the state (Joint Statement..., 2019).

The essence of the problem is that the enormous growth of China's economic power distorts the system of global and regional "economic gravity" and causes tension along the "power lines" of economic-gravitational interactions (Fojtíková, 2018). In addition to the EU common problems of trade and balance of payments deficit in economic relations with China and the Chinese market remaining closed in many respects, contradictions on the internal economic and gravitational lines of relations between members of the integration group are growing due to the external influence of the Eastern giant. So, the leading EU members such as Germany and France were outside the "16+1" platform, created to coordinate the economic positions of China and the CEE countries (11 of them are EU members). The divergence of positions of the Northern and Southern countries on the problem of the ratio of economic liberalism and protectionism in relation to trade with China and the conditions for attracting Chinese investment is deepening. Greece, Italy and Portugal are increasingly relying on Chinese loans, and Italy has also officially joined the Belt and Road Initiative.

In these conditions, the problem of procedural unity of EU members when voting on key geo-economic and geopolitical issues is exacerbating. In any case, in relation to acute foreign policy problems that require immediate solutions, the EU leadership considers it imperative to apply the principle of a qualified majority to determine a common and binding position for all. As Ursula von der Leyen notes, "I believe Europe should have a stronger and more united voice in the world – and it needs to act fast. That is why we must have the courage to take foreign policy decisions by qualified majority. And to stand united behind them" (Von der Leyen, 2019-a). It is also important to draw a common line while maintaining differences on various aspects of relations with the United States and Russia.

The issue of internal unity of the EU has also become relevant in connection with the Brexit problem (Kučerová, 2018). Analysts have repeatedly noted the "glocalisation paradox" associated with this problem. On the one hand, the withdrawal of one of the largest economies from the integration group obviously strengthens the parameters of locality and fragmentation of this group relative to the world economy system. On the other hand, the actual course of Brexit led to the strengthening the internal consolidation of the EU, and as a result, the weight of its role in external interactions. Fears that took place in the early stages of Brexit that the example of the UK would cause a chain reaction of the exit of other countries from the EU, and even its collapse, were not justified. On the contrary, the significant economic costs of the exit procedure, the prospects for even greater losses in the future, the sharp aggravation of internal social and political tensions in the country, the split of society, the constant appearance of new, previously unforeseen negative consequences of the exit - all this has markedly limited the activity of anti-integration forces in a number of countries. Moreover, in these countries

there is clearly no potential for applying for a status similar to the “global Britain” project, and this project itself looks very doubtful. The movement of Euro-skeptics is unlikely to threaten seriously the internal unity of the Union. It is obvious that the growth of their political activity and the increase in their representation in the European Parliament are connected with the protest against the bureaucratisation of the European administration and the negative consequences of the migration crisis, and not with the very principle of European unity.

A generalizing aspect of strengthening the EU's geopolitical role and bringing it into line with the geo-economic status of Europe as a global superpower is the conceptual approach to complement “soft power” in external activities with “hard power” tools. According to the settings of U. von der Leyen, “Soft power” will no longer be enough if the EU wants to assert itself on the world stage... Europe must also learn the language of power” (Von der Leyen, 2019-c). The problem of the ratio of soft and hard power will obviously be actualised in connection with the opening discussion on the prospects for modifying the fundamental Treaty on European Union.

4. Conclusion

The events of the last decade have clearly demonstrated the historical limit of the models of “hegemonic stability” and unipolar globalism. The new stage of globalization is characterized by an increased role of local subjects of international relations, the contradictory interaction of their dependence on global laws of social evolution and, at the same time, their influence on global processes, which gave rise to the phenomenon of glocalisation. In the conditions of modern glocalisation, the geo-economic and geopolitical positions and functions of the European Union as both a local integration association and, at the same time, one of the leading global actors are being significantly strengthened. The prospects for further expansion and complication of the EU's global functions are largely due to the strengthening of its internal unity and the ability to interact with global partners and competitors as a whole. The strengthening the integration consolidation of European countries occurs both as a result of internal logic and laws of integration processes, and as a response to external challenges. These challenges are currently diverse. They are represented by objective natural and social processes (first of all, negative changes in the planet's climate in the conditions of intensive development of new technological structures), and by subjective aspirations and actions of other global actors seeking to maintain or strengthen their global leadership.

The growing importance of the interests of local social actors is currently taking place not only in the context of trends of regionalisation and partial fragmentation of the world economy, but also against the backdrop of developing processes of forming global value chains, deepening the information and digital unity of the world, the genesis of global property relations and global governance. The experience of the EU, which has managed to create the most perfect system of supranational governance institutions in the modern world, ensuring the implementation of common goals and interests while taking into account the interests of individual countries, regions and other local entities, is of great importance for the development of global governance tools and mechanisms. This system, being an obvious prototype of the probable future configuration of global governance, acts, at the same time, as the most important lever for transforming the EU's geopolitical status, achieving this status of adequacy with the geo-economic role of the Union as a global economic superpower.

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Institutional Framework of European Development Assistance

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Abstract

European Union and its member states are the biggest donor of development assistance globally and they play vital role in many developing regions. In this paper, we analyse the organization of European Union development cooperation, development cooperation of member states and their coordination. We also compare the development cooperation system of the European Union and OECD DAC. Based on official documents of DG DEVCO, OECD DAC and member states' development cooperation agencies we compare the alignment of their mid-term goals and identify, which international development cooperation organization system and goals are better reflected in national plans.

Keywords: *development cooperation, European Union, OECD*

JEL Classification: *F63, F65, O19*

1. Introduction

European Union together with its member states are the biggest provider of official development assistance and are responsible for more than half of global official development assistance (57% in 2017). (European Commission [online], 2018) Although United Kingdom, the third biggest global official development assistance (ODA) provider, has left the European Union, the importance of European Union as key player in global development policy stays intact. As stated by Balabanov and Lendzhova (2018), united Europe is obliged to help those in distress who see it as their only hope for survival, not only due to of the humanitarian values on which it was constructed.

However, the area of development cooperation is not included in either exclusive competences or shared competences of the European Union. As stated in Article 4 of The Treaty on the Functioning of the European Union (C 326/47, 2012), in the area of development cooperation the Union “shall have competence to carry out activities and conduct a common policy; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs.” This means that European Union member states who are ODA providers have their own development policies and organizational structure that exercises their development policy activities.

In this paper, we analyse the framework of development assistance on the level of the European Union and the tools for effective coordination of development priorities of the European Union and its member states. To evaluate the coordination, we compare it to the coordination in another important group of official development assistance providers, Development Assistance Committee of the Organisation for Economic Co-operation and Development

(OECD DAC). This comparison is interesting because not only are some EU member states also member of OECD DAC, but European Union itself is one of the OECD DAC members.

2. Official Development Assistance of the European Union

In the area of development policy, the European Union is formally represented mainly by the Department for International Cooperation and Development, which belongs to the agenda of Commissioner for International Partnership Jutta Urpilainen. (European Commission [online], 2020a) Based on OECD data, European Union is the fourth biggest ODA donor in the world, after United States, Germany and United Kingdom. (Donor Tracker [online], 2020) Therefore, Directorate-General for International Cooperation and Development (DG DEVCO) distributes significant amount of funds to achieve its objectives.

2.1 Directorate-General for International Cooperation and Development

The roles of Directorate-General for International Cooperation and Development are to work together with partner countries across the world to achieve sustainable development and to design the EU's International partnership and development policy. The goals of development policy of the EU are to reduce poverty, ensure sustainable development, and promote democracy, human rights, and the rule of law across the world.

If we analyse the organizational structure of DG DEVCO, (European Commission [online], 2020b) we can see that coordination with EU member states is not among the priorities of the department. This agenda belongs to the A2 unit of directorate DEVCO.A, one of the directorates under Director-General Koen Doens. Directorate DEVCO.A is responsible for international cooperation and development policy and consists of six units.

Unit A2. Development Financing and Effectiveness, Relations with Member States has fourteen staff members and works in three main areas: financing for development and sustainable development; aid and development effectiveness; and working together better with member states. In the third area, the main responsibilities include leading policy work on joint programming and joint implementation outlined in the European Consensus on Development. (Sida [online], 2018)

European Consensus on Development (DG C 1, 2017) has been adopted in 2017 as EU's response to global Agenda 2030 to provide the framework for a common approach to development policy of EU institutions and member states. The Consensus calls for greater coherence between EU institutions and member states and for commitment to work better together, bearing in mind their respective comparative advantages. Better cooperation should be achieved by being consistent with the primary aim of eradicating poverty. More coherence between development policies of the European Union and its member states has been the aim since the global economic crisis, as the funding for official development assistance became scarce. (Zajackowski, 2013)

Part three of European Consensus of Development names tools for better cooperation between member states and EU institutions: joint programming, joint responses and joint implementation. All these schemes are open for member states; however, cooperation remains optional for member states, respecting their own development cooperation priorities.

Regarding financial commitments, European Consensus on Development only commits to collectively provide 0.7% of gross national income (GNI) as official development assistance, without any specific commitments from individual member states. Another part of financial

distribution mentions the target of using between 0.15% and 0.20% of GNI as ODA to least developed countries and mention particularly challenging situation in African countries.

The European Union is more active in Africa recently, which is a result of United Kingdom's presidency of the European Council and growing involvement of China and India on African continent. (Kovářová, 2014) However, research suggests, that European ODA is influenced more by economic potential of recipient countries than their humanitarian needs. (Bountagkidis, Frangos and Frangos, 2015)

2.2 OECD Development Assistance Committee

Development Assistance Committee (DAC) is the key forum for major donors to coordinate their development efforts and cooperate for more effective ODA. DAC has been established in 1961 to consult on the methods for making national resources available for assisting countries and areas in the process of economic development and for expanding and improving the flow of long-term funds and other development assistance to them. (OECD, 2006) OECD DAC has 30 members, of which 19 are members of the European Union and European Union itself is a member. European Commission has been a member of OECD DAC since its establishment in 1961. (OECD [online], 2020)

At the top of OECD DAC stands its chair, currently British diplomat Susanna Moorehead. The agenda of OECD DAC is influenced by the personality of its chair, as they set their priorities for two-year term. Susanna Moorehead has three priorities for her term during 2019 and 2020:

- a. Financing for development through and beyond ODA,
- b. Stimulating the debate on balancing between prevention and emergency response, investing in success and investing in fragility and failure, short and long-term outcomes and between generations,
- c. Gender equality. (Moorehead, 2019)

OECD DAC members meet regularly at meetings. High Level Meeting on the level of ministers takes place every 2 – 3 years, in between which Senior Level Meetings of the heads of aid agencies are held. (OECD, 2020) During the most recent High Level Meeting, delegates discussed e. g. new sources of development finance, improving the coherence between humanitarian and development policies and responding to refugee crisis. (OECD [online], 2017) Meanwhile, latest Senior Level Meeting delegates focused on more particular topics, including combating sexual exploitation and abuse in the development and humanitarian sectors. (OECD [online], 2019)

3. Development Priorities

There is a significant overlap of the membership of the European Union and OECD Development Assistance Committee. Some EU member states are biggest donors among the group of donors in OECD DAC. This introduces the question whether the priorities of these two platforms are consistent in their development policies and priorities. It is important to note, however, that strict focus on priorities of donors is criticized by (Chianca, 2008), who recommends greater focus on the needs of development assistance recipients.

As both DG DEVCO and OECD DAC are platforms for communication and cooperation efforts of development assistance providers, their goals are rather broad. The specific goals are usually set on the level of individual countries and often are difficult to combine within wide range of donors, as these country priorities reflect individual geopolitical interests and comparative advantages.

Based on the information provided by European Commission ([online], 2020c), the main priority of European Union's development policy is achieving 17 Sustainable Development Goals set by United Nations to be achieved by 2030. There are three additional priorities set by European development policy. First is Africa-Europe Alliance, long-term partnership seeking to boost employment and sustainable development in Africa. Digital partnership is the second priority, as the sector with the potential to create opportunities for sustainable development and inclusive growth. Last of the priorities is Green Deal, as the European Union is at the forefront of fighting climate change and should support other countries to address climate change, to protect the environment and ecosystems worldwide.

Principal objective of OECD DAC is to promote development co-operation and other relevant policies so as to contribute to the implementation of the 2030 Agenda for Sustainable Development. To achieve this overarching goal, members states should focus on sustained, inclusive and sustainable economic growth, poverty eradication and improvement of living standards in developing countries. The ultimate goal is to create a future in which no country will depend on aid. Geographically, OECD DAC calls for more emphasis on helping the neediest, e. g. least developed countries, low-income countries, small island developing states, land-locked developing countries. (DCD/21/FINAL)

Both multinational forums for development assistance cooperation, DG DEVCO and OECD DAC state Agenda 2030 and its Sustainable Development Goals as their priority, and state that this is overarching goal for their member states too. Regarding geographical priorities, both DG DEVCO and OECD DAC support greater focus of ODA towards least developed countries.

In both cases, however, the priorities are defined very broadly and always mention respect for individual approach of each donor country. This is relevant especially for newer member states in Central Europe, whose focus has been mainly countries of Eastern Partnership and the Balkans. (Paragi, 2008)

According to Carbone (2008), OECD DAC was unsuccessful in achieving coherence between donors' development policies and cooperation on European Union level is similarly unfruitful. Although efforts to achieve greater coherence in developing policies show little progress, coordination is successful in the field. As stated by (Lehtinen, 2003), lack of coordination is a false problem, as coordination in the field is very effective already.

4. Conclusion

In this paper we compared two important platforms for cooperation among official development assistance providers, their organizational structure and their long-term priorities. First, we analysed development policy on the European Union level by looking at Directorate-General for International Cooperation and Development. To compare it to another multinational platform, we analysed Development Assistance Committee of the Organization for Economic Cooperation and Development. These two donor platforms are interesting, because their membership overlaps significantly, and European Union is itself one of the OECD DAC members.

Organizational structure of DG DEVCO is built on European Commission staff based in Brussels with very little emphasis on coordination with member states. Only one unit in organizational structure has cooperation with member states as part of their agenda. As official development assistance of the European Union has its own funding, it does not depend on development assistance budget of its member states. Coherence and coordination between

European Union and member states in development policy is achieved by documents like European Consensus on Development, which are quite general.

On the other hand, OECD DAC has no own sources of ODA funding and its goals are completely dependent on ODA provided by its member states. Member states, therefore, have stronger position and their meetings are key element in the structure of OECD DAC. The Chair of OECD DAC sets its priorities for two-year term in office, but these have more declaratory function. Long term priorities of OECD DAC are also very general.

The main difference between DG DEVCO and OECD DAC is the importance of official development assistance providing countries and their position in the organizational structure. DG DEVCO operates with its own funding and therefore functions as another very important entity in ODA donor community. The coherence between European Union level development policy and development policies of member states is therefore not simple to achieve. This is evident in the joint agreements, where thematic priorities are very general and geographical priorities leave ample room for individual approach by member states. Although the coherence of development policies is not ideal, cooperation in the field between European Union and member states functions smoothly in most cases.

This paper covers the topic of priorities coordination between two multi-national development organizations, DG DEVCO and OECD DAC. In the future we would like to expand on this topic by analysing the compatibility of development priorities of these organizations and its member states to evaluate the coherence in their respective efforts towards development policy goals.

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Quality of Well-being and Environment Concerning the Level of Economic Prosperity Measured by GDP per capita

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Abstract

Since the second half of the last century, the successive liberalization of the world economy has contributed to massive production and rising living standards of people. However, the ever-expanding international expansion of business entities and the increasing use of natural resources have created many negative externalities. These include excessive environmental pollution or using higher annual biocapacity than the planet can create in a given year. Therefore, the main objective of the scientific state is based on regression analysis to examine and confirm or refute the relationship of selected variables, namely the dependent variable: GDP per capita - as a variable representing economic growth and independent variables: Environmental Performance Index (EPI) - representing the quality of the environment, and Happy Planet Index (HPI) - representing the quality of well-being. Subsequently, based on the estimated results of the regression analysis, identify the intensity of the relationships between the selected variables and formulate the relevant conclusions for the future direction of economies, especially EU countries.

Keywords: Environmental Performance Index, EU environmental measure, Gross Domestic Product per capita, Happy Planet Index, regression analysis, well-being

JEL Classification: C10, F64, O44, Q56

1. Introduction

Environmental threats of anthropological origin, such as global warming, rising water levels, adverse air conditions, excessive waste generation, or pollution of seas and oceans, are threats that directly alert us. They affect human well-being, natural processes and economic prosperity not only at present. What is alarming are the possible negative effects of human activity, which may arise in ten, fifty or even a hundred years, and thus affect the development of future generations. To preserve and maintain natural resources within a sustainable framework, it is first and foremost necessary to monitor the state of nature, the evolution of ecology, the implementation of new green measures in international and national policies, and subsequently oversee the environmental management of individual business entities. The sphere of science and research, the introduction of new technologies, the modernization of green infrastructure, and the education and rationalization of consumer behaviour can be areas that accept a long-term framework and thus the possibility of more sustainable development of society.

Almost half of the sustainable goals set by the United Nations in 2015 are environmental. With an ever-growing world population without sufficient drinking water, clean air and reasonable consumption, it will be difficult for individual nations to strive to achieve higher levels of health or to eliminate hunger and poverty. To achieve the objectives set, such as improving the quality of life of people and improving the quality of the environment, national governments

should streamline their management of natural resources and the social security of the population.

The basic prerequisite for the theory of sustainable development is to preserve, protect and promote the quality of life on earth. According to data from the Global Footprint Network (2019), it is clear that a company in a resource-constrained environment is not managing as effectively as possible in terms of the rationality of individual entities. We have examined this fact as the objective of this scientific state, which is to explore and confirm or refute the intensity of the relationships of selected variables, namely the dependent variable: GDP per capita - as a variable representing and reflecting the level of economic growth and independent variables: the Environmental Performance Index. (EPI)) - representing and determining the so-called environmental quality and Happy Planet Index (HPI) - which should tell you about quality of life. Based on the results obtained and formulate relevant conclusions.

2. Problem Formulation and Methodology

We understand economics as a science that explores the satisfaction of human needs related to the acquisition of scarce resources and their redistribution. The principle of economic theory is to make decisions that are as effective as possible. Ragnar Frische, a well-known Norwegian economist, said that the economy is in a network of interactions that span all sides. This means, if we change the conditions, on the one hand, they will be reflected in some other way (Naess, 1988).

2.1 Problem Formulation

Over the past decades, characterized by rapid population growth and depletion of natural resources, the concept of sustainability has been increasingly emerging and declining in many areas of social science. As one of the first economists, the problem of faster population growth over the growth of natural resources was raised by Thomas Malthus in 1798. Almost two hundred years later (in 1969) the term "sustainable development" was used for the first time in an official document signed by thirty-three African countries under the auspices of the International Union for Conservation of Nature (IUCN). In the same year, the US Environmental Protection Agency (US EPA) implemented the first theoretical and practical approaches to its nature conservation policy. Later in 1972, a group of economists and scientists in their work "The Limits to Growth" drew attention to the problem of future world development, precisely because of concerns about a rapidly growing population and a significant overflow of resources (Meadows et al. 1972).

However, sustainability as an economic concept was first characterized by the UN in 1987 in an official document called the Brundtland Report. A research team led by Dr. Gro Harlem Brundtland drew attention to the obligation to identify, investigate and analyze the impact of human activity on the environment. They stressed the need to use resources in the best possible way, because the world, and especially nature, is not as unlimited as humanity initially imagined (WCED, 1987).

The economic growth of European countries, especially after the Second World War, was characterized by the so-called "The way forward" through GDP and GNP respectively. Measurement-based on these variables took into account any activity. However, their intensity and growth may not be positive (Naess, 1988).

When developing a strategic political or corporate policy, it is therefore important to discuss the economic aspects of society. According to Naess, most people mistakenly think that

political decisions are the same as economic decisions. Most economic policy is decided by representatives with current political power. And today, according to many scientists and economists, we can confirm that the living conditions of future generations are in danger (Naess, 1988).

An important message of similar ideas was the understanding of the global concept of sustainability, in the sense that the change, on the one hand, induces changes in the network of mutual economic, environmental and other impacts, and changes in resource constraints - proven climate on a global scale, because the problems themselves go beyond the national borders of all economies.

With emerging global threats of a social and environmental nature, sustainability is categorized into a specific area of research at the beginning of the new millennium (Kates et al. 2001; Clark and Dickson 2003; Komiyama and Takeuchi 2006; Clark 2007). After important social milestones such as the agrarian and industrial revolution, which have been progressively and largely spontaneously and unconsciously in society, the perception and application of sustainability principles to individual scientific disciplines can be an important milestone in further social development (William Ruckelshaus, 1989, Raven 2002; Holdren 2008).

According to Clark (2007), sustainability science is not basic or applied research, but is the focus of entrepreneurs to better understand the importance of resource use. Sustainability cannot be characterized as an autonomous science discipline, but as a living sphere that links academia with real practice in various disciplines (Clark - Dickson 2003). According to Martens (2006), the main principles of sustainability are characterized by an interdisciplinary nature, and thus learning from practical activities, the co-production of knowledge and the evolution of a complex environment. Conversely, according to Ostrom et al. (2007) sustainability is characterized as an applied scientific discipline and its scientific knowledge is important to acquire from individual disciplines separately, to build a mature scientific discipline with analytical and diagnostic capabilities.

Perrings (2007) points out that it has been shown in the last century that the development of individual disciplines on their own has been a major source of progress, but at the same time limited the possibility of addressing cross-disciplinary problems simultaneously. According to Rapport, the science of sustainability cannot be considered a self-standing discipline, as it is not yet based on the knowledge and principles by which this "science" field can be systematically built. So far, it can be characterized as a set of perspectives and thoughts, sometimes conflicting, with which it is possible to achieve a vital and viable future for humanity. Sustainability and its importance now represent a key characteristic of the societal development as a whole - in its complex diversity, therefore understanding and integration into the interdisciplinary framework are important for the perspective of this discipline (Rapport 2007). According to Kabus – Jędrzejak – Mynarzová (2018) sustainability is not a rigorously determined category based on ecological and socio-economic activities. It is a concept that has been developing in time and space through differences in value systems.

To achieve sustainability in the broadest possible context, it is necessary to make decisions that allow it to operate in a resource-limited environment. Paradoxically, according to the Global Footprint Network analysis, a day in 2019, in which all mankind has pumped more natural resources than our planet can recover in one calendar year, dating back to July 29. Still, in 2000, it was the end of September and in the 1970s the end of December (Overshootday.org, 2019). Moreover, according to Kasztelan (2016), the aspect that progressively shapes the market advantage is green competitiveness - as long as the environment is treated as a common good on a national level.

The United Nations World Survey, conducted on the Twitter social network platform 2012-2015, shows a range of life's most important values that global society considers to be the most important: 1. Responsible government 2. Better jobs 3. Freedom and non-discrimination 4. Good education 5. Political freedom 6. Protection of forests, rivers, and oceans 7. Gender equality 8. Tackling climate change 9. Internet access 10. Reliable energy supply 11. Protecting and combating violence and crime 12. Better transport infrastructure 13. Access to clean and secure transport drinking water 14. Better health care 15. Affordable and quality food and 16. Support for people who cannot work (UN, 2015).

According to the results, we can divide these goals and values of the society into areas of sustainability, social justice, and welfare. Almost one-third of the specific objectives are environmental. However, in the absence of primary protection of natural resources and the risks arising from this absence, achieving the remaining, secondary objectives will be all the more difficult. The efficient policy has a crucial role to be sustainable. According to Luis – Giulio – Gabriel (2020) being green helps gain a more sustainable growth as well as a more inclusive one in the short-run and the long run as well. Accountability and strategic management are needed to set the right policy for connecting sustainability, profit optimization, and loss prevention (Frei – Jack – Krzyzaniak, 2020). Therefore, sustainability reporting could be an effective communication tool to increase transparency and accountability of the company, which can be facilitated by Agenda 2030 (Tsalis et al., 2019).

Nevertheless, the success of the current economic system of today's economies is set and based on the measurement of gross domestic product (GDP). According to this indicator, it is natural then that the macroeconomic but also the microeconomic objective is to produce, produce and consume as much as possible. GDP does not take into account the level of the environment, which directly affects various aspects of the standard of living in society. On the contrary, increasing its value, which we generally perceive as positive, involves pollution of the planet, activities of the black economy, environmental impacts of natural disasters, or overtime. The consumption and trade system set up in the early 20th century, especially in the USA, and strengthened in the second half of the 20th century, as a result of the post-war situation, especially in Europe, driven by efforts to start each economy as quickly as possible, has produced many counterproductive results.

This was confirmed by the words of Simon Kuznets, who was involved in the development of the US national accounting system in the 1930s, who argued that national income could hardly be inferred from the nation's true wealth. Later, in his public address in 1968, Robert Kennedy stated that gross national product measures everything except what makes life worthwhile. What only underlines the fact that the results achieved through the GDP indicator are often misrepresented and do not directly reflect the real standard of living of the population (U.S. Government, 1934).

Since then, efforts have been made to provide a more comprehensive expression of the level of quality of life, which is now increasingly intensive. This is one of the reasons why we know and are still developing several new index-based indicators and models constructed from them to assess the level of quality of life of the population, which seeks to identify the complexity of relationships between analytically expressive variables and those analytically unexpressible – soft factors. One of such models, for verification of dependencies of selected variables, is also applied to this scientific paper.

2.2 Methodology

According to our set aim, for evaluating the macroeconomic factors affecting the impact on the quality of life, we chose the method of regression analysis, by which we will examine and evaluate the dependence of selected variables characterizing the current economic development in the condition of selected factors of sustainable development. The initial equation for a given analysis can be written in the form (Lukáčik - Lukáčiková - Szomolányi, 2011):

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik} + u_i \quad (1)$$

y_i – *i*- observation of the modeled variable Y (dependent variable);

x_{i1} – *i*- observation of variable X_i (independent variable);

$\beta_0, \beta_1, \beta_2, \beta_k$ – estimated unknown parameters;

u_i – additive random component.

For its evaluation, we will use the Gretl program. Below is a more detailed identification of the selected indicators and the reasons for their choice:

Dependent variable:

The gross domestic product per capita (GDP p.c.) is the sum of goods produced in the territory of the given country, mostly for one year. This indicator can be considered as the most frequently used indicator of economic level and growth of individual national economies. We chose the gross domestic product per capita as a dependent variable that represents economic growth in our model. We can express it by the equation:

$$\text{GDP p.c.} = C + G + I + NX / \text{number of population} \quad (2)$$

C – summarizes the consumption in a given country over a given period time,

G - summarizes government spending in a given country over a given period time,

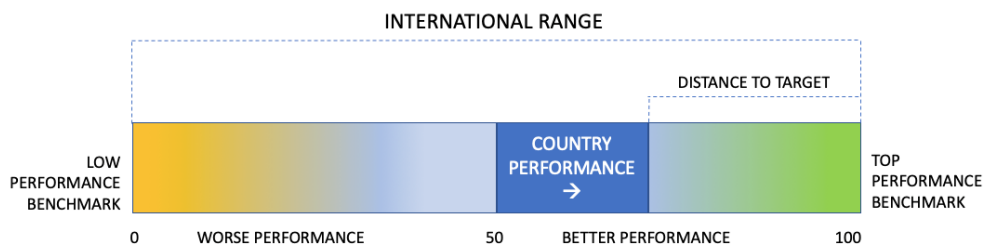
I - is the sum of investments made in a given country over a given period time and

NX - is the net export we get when we calculate total imports for a given period time from total exports.

In a given regression analysis, 132 countries were assessed together from data published in 2017.

Independent variable:

Environmental performance index - uses the so-called proximity target methodology, meaning that on a scale of 0 to 100 it is assessed how each country approaches the objectives of national or international environmental policies (Figure 1). The result “100” indicates the best-achieved value, while the result “0” indicates the worst achieved value.

Figure 1: Environmental Performance Index Rating Scale

Source: Environmental Performance Index; own elaboration (2019) according to: <https://epi.envirocenter.yale.edu/2018-epi-report/methodology>

Index environmentálnej výkonnosti na svojej stupnici berie do úvahy dve kľúčové skupiny politických cieľov s desiatimi kategóriami:

ENVIRONMENTAL HEALTH: Heavy Metals, Air Quality and Water Quality

ECOSYSTEM VITALITY: Climate & Energy, Biodiversity & Habitat, Water Resources, Forests, Air Pollution, Agriculture and Fisheries.

These ten groups of categories are further identified by 24 specific indicators, such as for example in the category "Climate & Energy" category, the produced emissions amount of carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄) and carbon (C).

A scale of 0 to 100 is made individually for each indicator. Consequently, the values of the countries surveyed accumulate in the final EPI result.

According to the EPI report from 2016, 140 countries were assessed and data were evaluated in the period 1950 - 2016. For the purposes of the regression analysis, however, we have selected 132 countries, because the countries were also evaluated in the other two indicators - necessary for the possibility of carrying out the relevant evaluation by regression analysis.

a) Happy Planet Index (HPI) - the second independent variable we chose for the calculation because it also includes environmental aspects in its values. This indicator points to the overall quality of life of the population, including an ecological footprint that tells us about the ecological burden on our planet. It can be said that it is based on the principle of sustainability and speaks of overall well-being, which also takes into account people's future needs. The calculation consists of the following indicators:

$$\text{HPI} = \frac{(\text{Life expectancy} \times \text{Experienced wellbeing}) \times \text{Inequality of outcomes}}{\text{Ecological Footprint}} \quad (3)$$

The Happy Planet Index divides countries into 9 categories, with up to the first category belong countries that achieve the best-positive results in a given area, and the last 9th category includes countries that get the worst results in a given area (Table 1).

Table 1 HPI Country Rating Scale

Category	HPI Assessment
1. (the best)	>44,6
2.	40,7 – 44,6
3.	36,7 – 40,6
4.	32,7 – 36,6
5.	28,7 – 32,6
6.	24,8 – 28,6
7.	20,8 – 24,7
8.	16,8 – 20,7
9. (the worst)	<16,8

Source: Happy Planet Index 2016; own elaboration (2019) according to: https://static1.squarespace.com/static/5735c421e321402778ee0ce9/t/578dec7837c58157b929b3d6/1468918904805/Methods+paper_2016.pdf

As mentioned for the purposes of evaluating the dependencies of the above - mentioned indicators by regression analysis, we used data from 132 countries of the world from the HPI 2016 report, more recent data have not been published yet.

3. Problem Solution

Adequate environmental policy is essential to eliminate environmental threats that may incur future costs for businesses operating on international markets. The implementation and acceptance of sustainable indicators are indispensable for the preservation of natural wealth.

On the basis of available and processed data from 132 countries, we have compiled a cross-sectional quantitative analysis that examines the relationships between already defined indicators:

- a) Gross domestic product per capita - GDP p. c. (*dependent variable*)
- b) Environmental performance index – EPI (*independent variable*)
- c) Happy Planet Index – HPI (*independent variable*)

The result of quantitative analysis with one dependent and two independent variables is expressed in Table 2. For more relevant results, we used data of all three variables in the log form. Altogether, 132 countries were examined for which the values and results of all three variables were expressed.

Table 2 Regression Analysis: Model 1*Model 1: OLS, using observations 1-132**Dependent variable: l_GDPpc2017**Log-likelihood for GDPpc2017 = -1283,89*

	Coefficient	Std. Error	t-ratio	p-value	
const	-14,2449	1,21991	-11,68	<0,0001	***
l_HPI2016	-0,128174	0,239197	-0,5359	0,5930	
l_EPIScore	5,51593	0,303438	18,18	<0,0001	***

Mean dependent var	8,621039		S.D. dependent var	1,454922
Sum squared resid	70,51255		S.E. of regression	0,739330
R-squared	0,745718		Adjusted R-squared	0,741776
F(2, 129)	189,1554		P-value(F)	4,39e-39
Log-likelihood	-145,9172		Akaike criterion	297,8343
Schwarz criterion	306,4827		Hannan-Quinn	301,3486

Source: Regression Analysis: Model 1; own elaboration (2019) according to: Gretl program

Based on the results of the quantitative analysis, we can confirm that 74.5% of the data is explained by the coefficient of determination. There is no heteroskedasticity error in the file and collinearity is not present. The resulting equation of the variables examined is defined as follows:

$$\text{GDP p. c.} = -14,2449 - 0,128174 * \text{HPI} + 5,51593 * \text{EPI}$$

Result - if the Environmental Performance Index increases by 1%, we expect an increase in GDP p. c. by 5.51%, which indicates a strong impact of the surveyed index on GDP p. c. growth.

The equation expresses that a statistically significant link exists only between gross domestic product (GDP p. c.) and the Environmental Performance Index (EPI). However, between GDP p. c. and the Happy Planet Index (HPI) does not exist.

The result of the equation expresses that effective management of natural resources, environmental protection and indirect improvement of human quality of life have a positive relationship with per capita GDP growth. However, there is no statistical link between the Happy Planet Index and the GDP per capita figures. This result can be corroborated by the words of Nick Marks (2010), claiming that the quality of life and wealth of a nation is not a direct measure of gross domestic product. It can also be argued that effective management of nature and ecosystem protection is both positive for human society and an essential indicator of economic growth, such as GDP, to meet environmental objectives. It can also be assumed that measuring the ecological footprint and taking it into account in the implementation of

country policies would contribute to the quality of life of people and nature, as well as to improving the level of the HPI index. However, this trend could subsequently reduce the economic growth and thus the consumption effect of society, which could mean a change in the decision-making of economic subjects to more rational allocation of scarce resources.

Measurement of ecological footprint is an important indicator in achieving sustainability in the issue of natural resource depletion. We can say that just taking into account the level of treatment and use of these scarce resources tells us about the effectiveness of environmental management and policy of individual economies and business entities. The problem remains, however, that the latest data available from the Global Footprint Network (2019) points to an ever-increasing global ecological footprint, which, given the importance of addressing environmental issues, can be considered insufficient and inadequate in the context of resource efficiency and sustainable development as well as an ever-increasing population.

We are inclined to believe that, compared to EPI or GDP, the Happy Planet Index is a more comprehensive indicator of people's quality of life. This, however, includes several behavioral so-called soft variables that cannot be objectively analyzed and expressed analytically and which may differ in various aspects, such as culture (a number of its elements, the most important of which include religion, level of education, beliefs, etc.), expectations and mentality of the given population of the country, conditioned by historical context.

4. Conclusion

The absence of responsible policies at the national and corporate levels in the past leads the economic subjects to address the negative externalities at present. Often, economic decisions do not take into account the effects they can create by their negative externalities. That is also why many of the economic results of individual market players are oriented towards short-term yields, not long-term prosperity, thus absented from sustainability and not contributing to the favorable future development of society, as evidenced by the increasing creation of the global ecological footprint. The aim and engine of the subjects are, especially since the second half of the 20th century - maximizing revenue, with the increasing use of natural resources, disregarding possible future negative development scenarios. In the given intentions, this development continues despite many efforts to reverse it. It is important to point out the need for global solutions to improve the conditions for sustainable development, and this is not yet the "united" will of most countries. Significant decisions veto especially so-called world leaders and thus decisive economic leaders. Nevertheless, we consider positive and significant recent EU initiatives aimed at addressing this issue within our region. These are in particular: The European Green Deal, Belmont Forum, Sustainable development goals, Innovating cities, The Prima initiative, Circular Economy Action Plan and others. It is only to be hoped that, even on a global scale, decisions of maintaining acceptable living conditions on the planet Earth will be taken by all representatives of the states.

They could also use the construction of increasingly complex and sophisticated indicators with a high level of information to express the various aspects of people's quality of life. Because it is clear from our cross-sectional quantitative analysis that production and revenue growth, as measured by GDP, do not represent the complete prosperity of society compared to many other indicators that assess the quality of life more comprehensively. However, their expression is often very difficult because they reflect a very wide range of aspects of human life, many of which are so-called soft factors are not directly analytically expressive - heuristic methods are used for their expressions and thus they get into mathematical-statistical dependencies in the form inexpressible variables.

Quality of life is directly related to the quality of the environment and the extent to which countries are pumping natural resources to meet their needs, as they also accept other, increasingly urgent, sustainable development requirements. These are very serious challenges of the present, with direct consequences for the future development of our civilization. Therefore, the approach of society, which aims to achieve a quality life for its population in the broadest sense of the word, with an appropriate burden on our planet, can be considered the right-sustainable one.

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Tax Incentives as an Innovation Policy Tool in New Member States of the EU

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Abstract

Research and development is considered to be an essential source of innovation, especially of radical innovation. However, conducting research and development is expensive, and its results are uncertain. National governments, therefore, seek to motivate enterprises to invest in R&D by providing them with support for research activities. Direct support in the form of subsidies is the most commonly used instrument. On the other hand, in the last 15 years, indirect R&D support has become a popular tool for research enhancement. This kind of support lies in providing various tax incentives for R&D expenditures, such as R&D tax credit, R&D tax allowance, payroll withholding tax credit, accelerated depreciation for R&D capital and social security contributions. With respect to the European competition law, such support is not considered state aid. The article deals with the use of tax incentives for research and development in countries that entered the EU in 2004. We compare the instruments used and their fundamental characteristics. The contribution also discusses the advantages and disadvantages of indirect support compared to direct support.

Keywords: innovation, public support, research and development, tax incentive

JEL Classification: H25, O23, O38

1. Introduction

Individual countries and their regions must seek their competitive advantage in new knowledge and innovation if they want to be competitive and to be successful in the global market. This fact is well recognized by policy-makers in the European Union itself and its member states. Innovation is not only an essential factor for future economic growth but also a tool for solving societal problems. Besides, innovations can eliminate the negative environmental impact of human activity.

One of the underlying sources of new knowledge that is necessary for innovative activities is research and development (Kraftová and Miháliková, 2011). Although there are also other incentives to generate innovation (see Science-Technology-Innovation and Doing-Using-Interacting innovation models by Isaksen and Nilsson, 2013), research and development (R&D) is essential for radical innovations that have a significant impact on the economy and its competitiveness.

National governments can support research and development in business in two basic ways (e.g., Klímová et al., 2020). The direct support enhances business expenditures on R&D (BERD) through grants that are allocated in public tenders. The indirect support of research

and development is usually based on some form of tax incentives. Our paper deals with the indirect type of R&D support.

Concerning the R&D incentives, one of the challenges for innovation policy is to find a policy tool that enhances innovation, is not too burdensome for public budgets, and at the same time, eliminates the behavioural distortions caused by other instruments (d'Andria and Savin, 2018). In our opinion, R&D tax support can meet these requirements.

Indirect support is intended for companies of all sizes carrying out their research activities. Unlike grants, any innovation actor who complies with the legal requirements is eligible for this aid. Therefore, this aid does not have a selective character and has minimal impact on competition. That distinguishes indirect support from the direct one.

Governments in developed countries usually provide both types of support. It has been proved that businesses that benefit from indirect support use direct support often (Ferreira et al., 2019). However, both types of support must be used for different research projects. In other words, if R&D expenditures are supported by some form of direct aid from public sources (grant, loan, guarantee), the same expenditures cannot be advantaged through R&D tax incentives (i.e., indirect aid). That is determined by the EU rules on state aid (European Commission, 2014). The difference between direct and indirect aid also lies in the fact that the amount and conditions of direct support are strictly limited by EU legislation. In contrast, in the area of indirect support, the member states have more competences.

2. Aim and Methodology

The aim of our paper is to compare the countries that joined the EU in 2004 in terms of tax instruments used to support R&D activities in companies. Our analysis is based on data collected annually by the Organization for Economic Cooperation and Development (OECD 2019, 2020). This unique source of information offers data that is comparable across countries. In our research, we asked two fundamental questions. What tax instruments do these new member states use to encourage business R&D expenditures? How do these instruments differ among countries?

In accordance with the OECD classification, we focused on the following types of instruments: R&D tax allowance, R&D tax credit, payroll withholding tax credit, social security contribution (SSC) and accelerated depreciation of R&D capital. The first two instruments and the depreciation are usually associated with corporate income tax. In the analysis, we did not deal with tax instruments, which also serve to enterprise support, but do not directly concern R&D activities. Examples of such tools are investment incentives, support for venture capital (e.g., write-offs of unprofitable investments) or tax support linked to the acquisition of intellectual property rights (e.g., patent box).

Individual modes of tax R&D incentives can be characterized as follows (Appelt et al., 2016; OECD, 2019):

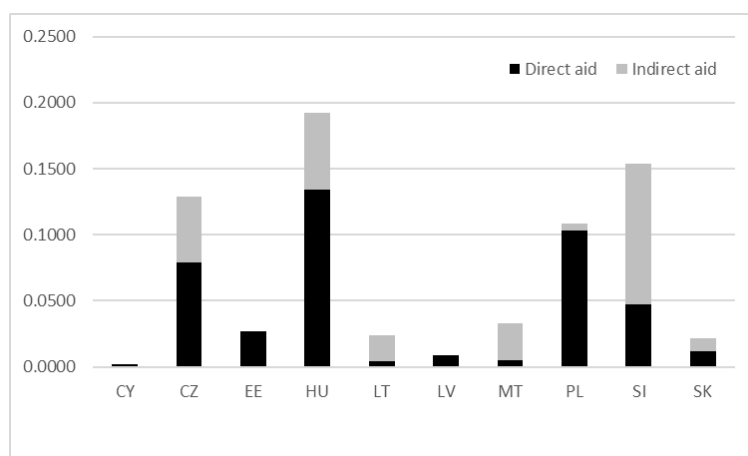
- a. R&D tax allowance – R&D costs deducted from the company's tax base before the tax liability is calculated,
- b. R&D tax credit – amount deducted directly from the tax liability,
- c. payroll withholding tax credit - relief redeemable against payroll withholding taxes paid for R&D workers,
- d. social security contribution (SSC) - relief redeemable against social security contributions paid for R&D workers and
- e. accelerated depreciation of R&D capital – depreciation of capital assets (machinery and equipment, buildings) used for R&D activities.

3. R&D Tax Incentives Used in New Member States of the EU

The popularity of R&D tax support is generally growing. While only a few countries in Europe implemented this support in the 1990s, it is now used in most EU countries. One of the reasons for its use is its conformity with fair competition (e.g., Raszková and Klímová, 2018). However, direct support also has some advantages, especially a higher motivational effect for conducting R&D activities (e.g., Busom et al., 2014).

Figure 1 shows the share of direct and indirect R&D support in GDP. The highest overall R&D support (expressed as a percentage of GDP) in 2017 was provided in Hungary, Slovenia and the Czech Republic. The highest tax support to enhance R&D activities was detected in Slovenia (0.1067%), followed by Hungary (0.0582%) and the Czech Republic (0.0499%). When comparing the relationship between the direct and indirect aid in the country, the highest share of indirect aid was found in Malta (85%), Lithuania (83%) and Slovenia (69%).

Figure 1: Direct Funding and Tax Incentives for Business R&D in 2017 (in % of GDP)



Note: Direct funding in Cyprus, Malta, Poland and Slovenia – data for 2016

Source: authors' own processing based on OECD (2020)

Of the ten new EU Member States, seven countries use R&D tax incentives. Three states (Cyprus, Estonia, Latvia) do not use any tax support, but in some of them, there is a broad debate about this tool of innovation policy. Probably the most attention is given to this topic in Estonia (Ministry of Economics and Communication, 2009). The situation in Latvia is atypical because this country had an R&D tax allowance, but in 2015 this instrument was abolished (CPB, 2014).

Our analysis shows (table 1) that all seven states use R&D tax allowance. Three of them also use other tools. None of the examined countries use the tax credit, although this is a standard policy instrument for the enhancement of R&D expenditures in other EU countries. Some of the investigated countries use tax credit in other areas of enterprise support, e.g., the Czech Republic, Hungary and Slovakia use it to support investment projects. However, these types of support were not of interest to us.

Table 1: Types of R&D Tax Incentives in New Member States of the EU

Type of tax incentive	Implementing countries
R&D tax allowance	Czech Republic (CZ), Hungary (HU), Lithuania (LT), Malta (MT), Poland (PL), Slovakia (SK), Slovenia (SI)
SSC reduction	Hungary (HU)
Accelerated depreciation	Lithuania (LT), Poland (PL)
None	Cyprus (CY), Estonia (EE), Latvia (LV)

Note: Any of the analysed countries does not use R&D tax credit and payroll withholding tax credit.

Source: authors' own processing based on OECD (2020)

The Czech Republic has been offering the R&D tax allowance since 2005. In 2014, the conditions were modified and including a more comprehensive range of costs in the deduction was enabled. In addition, entrepreneurs were not satisfied with the administrative requirements, and therefore, changes in administrative procedures were implemented in 2019. Nevertheless, R&D tax support in the Czech Republic has a growing trend and its share in both GDP and government support for R&D is growing (OECD, 2019).

Hungary offers three types of tax investments, two of them are provided in the form of R&D tax allowance and one represents the SSC mode. R&D tax incentives were introduced in 1996. An unconventional tool of Hungarian innovation policy is the SSC scheme. This tool offers an exemption from social security tax for researchers with a PhD employed in the company. Besides the tax allowance provided by the Hungarian government, the law enables municipalities to provide 10% tax incentives for R&D direct costs. These conditions vary from city to city, and therefore, our analysis does not deal with it. In recent years, the analysed support has been decreasing, both in absolute and relative amounts. Expressed as a percentage of GDP, tax support fell from 0.15% in 2004 to 0.06 in 2017 (OECD, 2019). By contrast, direct support has a growing trend.

R&D tax allowance in Lithuania was put into practice in 2008. Besides, this country offers the accelerated depreciation of R&D assets. Lithuania is atypical in that the share of indirect support is higher than the share of direct support. The percentage of indirect support in GDP has a rising trend, but it is still low in comparison with other states.

The Polish government has been providing R&D tax allowance only since 2016, so it is not yet possible to assess its development. More precisely, before 2016, there was another type of tax R&D incentive, which offered accelerated depreciation of machinery, equipment and buildings. Within the new scheme, the Polish government has prepared special tax conditions for companies having the Research Development Centre status.

The Slovak Republic introduced tax R&D incentives only in 2017. The amount of provided incentives increases every year but is still among the lowest.

In Slovenia, tax R&D incentives were introduced in 2005. Since then, their use has been increasing and has the highest share of GDP of all the countries analysed.

The following part of our analysis focuses on the R&D tax allowance as it is significantly the most widely used type of tax incentive in the investigated countries. The fundamental question is, what costs can be deducted from the tax base. As we can see in table 2, labour costs and consumables are eligible expenses for tax schemes in all countries. Most countries allow supported companies to purchase R&D services, particularly from universities and public research organizations. In other words, cooperation between research and business sectors is

supported in this way. Lithuania and Hungary even allow purchasing R&D services abroad, which creates better conditions for the internationalization of research activities.

In most countries, the expenses for buying machinery, equipment and real estate cannot be included in the eligible costs. Instead, it is usually possible to apply the depreciation of capital assets. R&D labour paid by 3rd parties is supported in Hungary only. Lithuania does not enable the cost of tangible assets or depreciation to be included in the eligible expenses, but at the same time, it offers a different scheme to support R&D investments (see accelerated depreciation in table 1).

Table 2: R&D Tax Allowance – Eligible Costs in Individual Countries

Eligible costs	CZ	HU	LT	MT	PL	SK	SI
Wages and salaries	yes	yes	yes	yes	yes	yes	yes
R&D services	yes	no	yes	no	yes	yes	yes
Consumables	yes	yes	yes	yes	yes	yes	yes
Machinery and equipment	no	yes	no	no	no	yes	yes
Land and buildings	no	yes	no	no	no	yes	no
Depreciation	yes	yes	no	yes	yes	yes	no
R&D labour paid by 3rd parties	no	yes	no	no	no	no	no
R&D services incurred abroad	no	yes	yes	no	no	no	no

Note: The special Hungarian R&D tax allowance scheme for innovation activities and Polish R&D tax allowance scheme focused solely on Research Development Centres are not included.

Source: authors' own processing based on OECD (2020)

The basic features of R&D allowance in the investigated countries are shown in table 3. The crucial parameter in the implementation of tax incentives is how to calculate the amount of expenditure that can be deducted from the tax base. There are three basic options: volume base, incremental base and mix of both types. Volume-based tax incentives are proportional to the total amount of business R&D expenditures, e.g., for every EUR 100 spent, the company can deduct another EUR 100 from its tax base. Incremental tax incentives are proportional to the increase in R&D expenditures in comparison with the defined base level, e.g., year-on-year increase (Ognyanova, 2017). The empirical analysis confirmed that both volume-based and incremental schemes bring additional R&D expenditure. Nevertheless, the mix of both types is more effective (CBP, 2014). On the other hand, the mixed scheme combining volume-based and incremental incentives can increase the complexity of the tax system and increase administration costs for businesses (Sterlacchini and Venturini, 2019).

Table 3: Basic Features of R&D Allowance Deducted from Taxable Income

Eligible costs	CZ	HU	LT	MT	PL	SK	SI
Volume-based rate (%)	100	100 (300*)	200	50	100	100	100
Incremental rate (%)	10	-	-	-	-	100	-
Ceilings	-	-(yes*)	-	yes	-	-	-
Carry-forward (years)	3	5	indefinite	indefinite	6	4	5

Note: The special Hungarian R&D tax allowance scheme for innovation activities and Polish R&D tax allowance scheme focused solely on Research Development Centres are not included. The data marked with an asterisk (*) are valid only in the case of research collaboration.

Source: authors' own processing based on OECD (2020)

Table 3 shows that all examined countries use volume-based deductions. Only the Czech Republic and Slovakia offer a mixed approach and companies can deduct from the tax base both the total amount invested in R&D in the relevant year and also a part of the year-on-year increase in R&D expenditures. The highest tax deduction is provided by Lithuania, which has a 200 percent enhanced allowance. It means that for every EUR 100 spent on R&D, a company can deduct another EUR 200 from its tax base.

Most governments do not limit the maximum amount of support, i.e., do not set a ceiling for support. Malta is the only country that limits the amount of aid (to 5% of turnover). Hungary and Poland limit the aid only in specific cases. In the case of cooperation, Hungarian companies can deduct up to 300% of R&D expenditure from the tax base, but the maximum support is HUF 50 million per year and organization at the same time.

A characteristic feature of the R&D tax allowance is that an enterprise can only use the tax incentive if it is profitable. If its expenditures exceed its revenues, it has no tax base from which to deduct it. However, companies preparing to launch innovations often make a loss. For this reason, governments set some period during which R&D expenditures can be deducted. This system is called a carry-forward system. All the analysed countries apply this system and the period for deduction is at least three years after cost occurrence. However, some states impose additional restrictive conditions, for example, that the deduction may not exceed 50% of the tax base.

Finally, it should be noted that the conditions for providing tax incentives may vary according to the size of the company. However, in the countries we analysed, the same terms are applied to all size categories of enterprises. Therefore, we have not paid attention to this matter.

4. Conclusion

The main advantage of indirect R&D support is its non-selectivity, which is unnecessary for achieving fair competition. R&D tax incentives are administratively less demanding than grants, but at the same time, it creates new requirements for tax legislation, which is becoming more complicated. It is also not easy to estimate the impact of indirect support on tax revenues and public budgets in advance. Tax support is not provided only to selected sectors (industries). That is positive, on the one hand, as this does not disturb the market allocation of investments. On the other hand, it makes it impossible to target public interventions precisely. Accordingly, several authors (e.g., Czarnitzki et al., 2011) stress that government failure is usually connected to direct support and that in the case of indirect support, this risk is minimized.

The article dealt with R&D tax support in countries that joined the EU in 2004. Seven of these ten countries use indirect tax support to stimulate business R&D expenditures. In general, tax incentives as an innovation policy tool are increasingly popular. While only a few countries in Europe used this instrument in the 1990s, most states now use it. From the perspective of the EU law, R&D tax incentives are not considered to be state aid, and therefore, individual member states can regulate their form and have a high degree of autonomy. The level of cooperation and interaction between member states in this area is not high. If countries work together, it is more about sharing experience on the implementation of individual tax tools.

The highest tax support (expressed as a percentage of GDP) is provided in Slovenia, Hungary and the Czech Republic. If the amount of indirect aid is expressed as a share of total R&D aid, this is highest in small countries such as Malta, Lithuania and Slovenia. All seven examined countries use R&D tax allowance. Besides, three of them also use other instruments. Our analysis focused mainly on the R&D tax allowance. The eligible costs most commonly deducted from the tax base include labour costs, consumables and purchase of R&D services.

All seven countries use volume-based deductions, and the Czech Republic and Slovakia also allow to deduct an increase in expenditure. Most states, except Malta, do not set a maximum amount of indirect support (ceiling). All countries use a carry-forward system that allows companies to deduct R&D costs in subsequent years if they are loss-making in the reference year.

The article analysed only the basic features of tax instruments used to stimulate R&D in selected countries. That is its limit and space for future research at the same time. Further research should focus on more detailed parameters of the tax schemes and the development of these tools over time. Attention should also be paid to the popularity of this tool among companies and their satisfaction with the regulation.

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