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How to Cope With Disrupted Times*









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# ANALYSIS OF UNEMPLOYMENT USING FOUR-FACTOR MODEL IN EUROPEAN UNION COUNTRIES

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DOI:

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**Abstract:** *The paper deals with the analysis of unemployment in European Union countries on the basis of data of the unemployment rate and the number of unemployed. The data are obtained from the Eurostat website. The aim of the paper is to find out how the number of unemployed in individual EU countries changed in 2018 compared to 2009, in which country the number of unemployed increased the most, in which the least. Appropriate tools of economic statistics are used for the analysis. Based on a four-factor model of the analysis of the number of unemployed, we find out how this indicator has changed depending on the change in the unemployment rate, the economic activity rate, the share of the working age population in the total population, and the total population.*

*The application of statistical method is implemented through the programme Microsoft Office Excel.*

**Keywords:** *Unemployment rate, Number of unemployed, Four-factor model, European Union countries.*

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## 1. INTRODUCTION

Each of the world's economies is trying to keep unemployment down. In this respect, Slovakia is experiencing a positive trend, unemployment has been declining since 2013. Unemployment is affected by several factors. Unemployment of young people and graduates is also a much-discussed topic. A large number of young people or graduates with the necessary experience are leaving for work outside the borders of the Slovak Republic. Then it may be a brain drain, which is a negative phenomenon for any economy. However, brain drain can be prevented by a suitable study environment as well as a modern work environment and good working conditions.

Unemployment can be analysed using indicators of the unemployment rate and the number of unemployed.

We recognize several types of unemployment rate – unemployment rate according to data from the Labour Force Survey (for more details see the Employment Institute), unemployment rate of the working age population, registered unemployment rate, available unemployment rate (more in Hurbánková, Sivašová, 2018).

## 2. LITERATURE OVERVIEW

Card, Freeman (1993) researched that the emergence of a relative unemployment gap between Canada and the United States has sparked much speculation and researched into its causes. Many observers argued that the gap reflected the more severe economic downturn in Canada in the early 1980s. Following the longest expansion in the post-war era, however, it is difficult to argue that the unemployment gap is a short-run adjustment phenomenon. In their paper they investigated an alternative „structural hypothesis”: that the divergence in unemployment rates

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reflects an emerging structural difference in the nature of unemployment and labour supply in the two countries. To understand this difference, they analysed individual employment and unemployment data from the United States and Canada at the beginning and end of the 1980s. Their investigation points to several complementary explanations for the relative growth of unemployment in Canada, including relative changes in the fraction of nonworking time that is reported as unemployment, and relative changes in the overall distributions of working and nonworking time.

Belot, Ours (2001) investigated to what extent differences of the unemployment rate between OECD countries are related to labour market institutions. In their analysis they used data of eighteen OECD countries over the period 1960-1994 and showed that the way in which institutions interact is important.

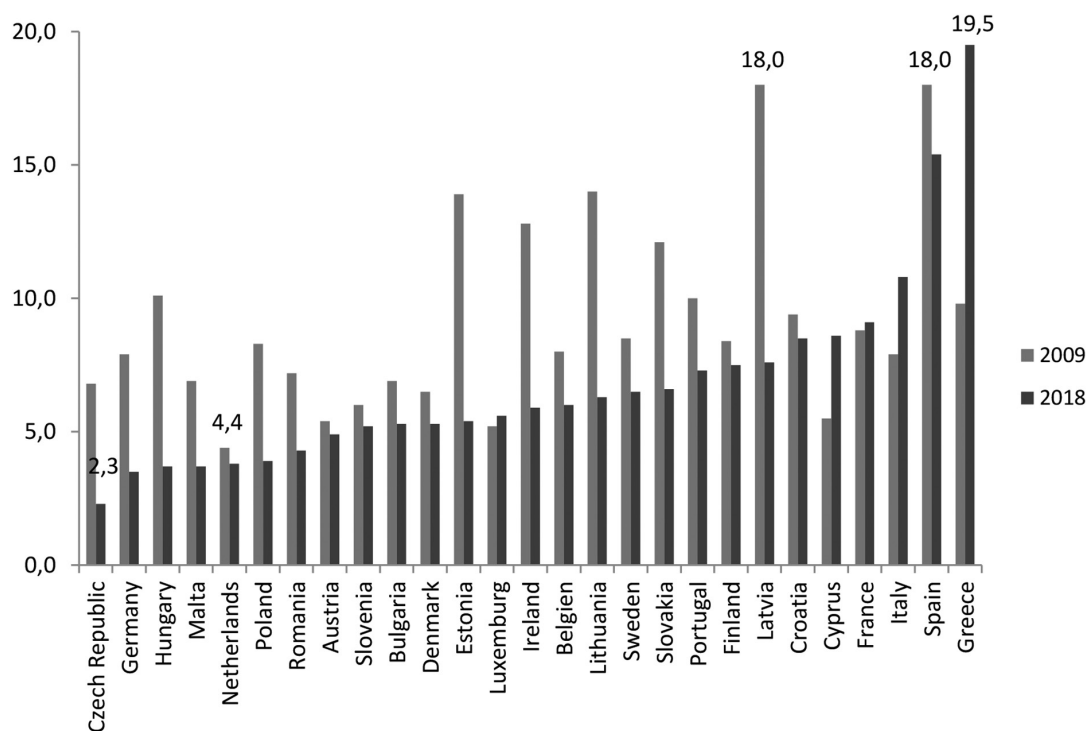
Amato, Beattie (2011) analysed data from 50 states and the District of Columbia from 1960 to 2005 to study how the unemployment rate and the divorce rate are related. Unemployment is positively related to divorce in a bivariate analysis, but the association is not significant when state and year fixed effects are included in the statistical model. When the sample is divided into time periods, unemployment is negatively and significantly associated with divorce after 1980. These findings provide the strongest support for a “cost of divorce” perspective and suggest that a high rate of unemployment decreases the rate of divorce.

Kreishan (2011) in his paper investigates the relationship between unemployment and economic growth in Jordan through the implementation of Okun’s law using annual data covering the period 1970-2008. Time series techniques, cointegration test and a simple regression he used to test the relation between unemployment and economic growth. He found out that the lack of economic growth does not explain the unemployment problem in Jordan. The study recommended that economic policies related to demand management would not have an important effect in reducing unemployment rate. Accordingly, implementation of economic policies oriented to structural change and reform in the labour market would be more appropriate by policy makers in Jordan.

Hadaš-Dudych, Pietrzak, Balcerzak, (2016) conducted comparative analysis of the unemployment phenomena in Visegrad countries. For this purpose, wavelet analysis was applied. In the research a discrete wavelet transformation was used, which has been recently effectively used for analysis of macroeconomic indicators. The empirical research was conducted for the years 1998-2016 and it was based on the Eurostat data. In the research the following hypothesis was verified: the phenomenon of unemployment in the case of Poland, Slovakia and Hungary is formed in a quite similar way, whereas in Czech Republic the situation on the labour markets is mainly determined by factors of different nature.

### **3. ANALYSIS OF THE UNEMPLOYMENT RATE IN INDIVIDUAL EUROPEAN UNION COUNTRIES**

We will first deal with the analysis of the unemployment rate, specifically the unemployment rate of the working age population. Figure 1 shows the unemployment rate of the working age population in individual countries of the European Union (hereinafter EU) in 2009 and 2018. The countries are ranked according to the lowest value of the analysed indicator in 2018.



**Figure 1:** Unemployment rate of persons aged 15-64 in % in individual EU countries in 2009 and 2018

**Source:** own processing in MS Excel based on data from Eurostat

As we can see from Figure 1, in 2018 the lowest unemployment rate of the working age population was in the Czech Republic, only 2.3% of the working age population was unemployed of the number of economically active working age population. The Czech Republic is followed by Germany, Hungary, Malta, the Netherlands and Poland, which had an unemployment rate of 3.5-3.9%. The highest rate in 2018 was 19.5% in Greece, 15.4% in Spain and 10.8% in Italy. In Slovakia, this indicator was at the level of 6.6%, while our country ranked 18<sup>th</sup> among the analysed 27 countries of the European Union. As of 2009, the lowest unemployment rates of the working age population were recorded in the Netherlands (4.4%), Luxembourg, Austria and Cyprus (around 5%). The highest value of this indicator was in Latvia and Spain at 18.0%. In our country it was at the level of 12.1%. We can observe that in most countries there was a decrease in the unemployment rate in 2018 compared to 2009. The highest decrease was recorded in Latvia (by 10.4 percentage points). In Slovakia, there was a decrease of 5.5 pp. A slight increase can be observed in France (by 0.3 pp) and Luxembourg (by 0.4 pp), the highest increase in Greece (by 9.7 pp). There has also been an increase in the unemployment rate of the working age population in Cyprus and Italy.

#### 4. ANALYSIS OF THE NUMBER OF UNEMPLOYED IN INDIVIDUAL EUROPEAN UNION COUNTRIES

In this part of the paper, we will focus our attention on the analysis of an extensive indicator – the number of unemployed in the working age (in the age of 15-64 years). We will monitor how this indicator changed in individual EU countries in 2018 compared to 2009 and based on a four-factor model of the analysis of the number of unemployed, we find out how this indicator has changed depending on the change in the unemployment rate, the economic activity rate, the share of the working age population in the total population and the total population.

#### 4.1 Four-factor model for the analysis of the number of unemployed

The number of unemployed in the working age is influenced by the factors of the unemployment rate of the working-age population, the economic activity rate of the working age population, the share of the working age population in the total population and the total population. We obtain a 4-factor model, which we can write as follows:

$$U_{15-64} = \frac{U_{15-64}}{M_{15-64}} * \frac{M_{15-64}}{N_{15-64}} * \frac{N_{15-64}}{N_{0-100}} * N_{0-100} \quad (1)$$

where:

$\frac{U_{15-64}}{M_{15-64}}$  is the unemployment rate of the working age population ( $u_{15-64}$ ),

$\frac{M_{15-64}}{N_{15-64}}$  is the economic activity rate of the working age population ( $a_{15-64}$ ),

$\frac{N_{15-64}}{N_{0-100}}$  is the share of the working age population in the total population ( $p_{15-64}$ ),

$N_{0-100}$  is the total population.

We can also write the relationship as follows:

$$U_{15-64} = u_{15-64} * a_{15-64} * p_{15-64} * N_{0-100} \quad (2)$$

Since the multiplicative relation applies to individual factors, the following also applies to their development indices:

$$i_{U_{15-64}} = i_{u_{15-64}} * i_{a_{15-64}} * i_{p_{15-64}} * i_{N_{0-100}} \quad (3)$$

We will use a logarithmic decomposition to analyse the absolute changes in the number of unemployed. When we logarithm relation 3, we get the relation:

$$\log i_{U_{15-64}} = \log i_{u_{15-64}} + \log i_{a_{15-64}} + \log i_{p_{15-64}} + \log i_{N_{0-100}} \quad (4)$$

To adjust the relationship, we divide all logarithms of individual factors by the logarithm of the top indicator (number of unemployed):

$$1 = \frac{\log i_{u_{15-64}}}{\log i_{U_{15-64}}} + \frac{\log i_{a_{15-64}}}{\log i_{U_{15-64}}} + \frac{\log i_{p_{15-64}}}{\log i_{U_{15-64}}} + \frac{\log i_{N_{0-100}}}{\log i_{U_{15-64}}} \quad (5)$$

When we multiply the relationship (5) by the absolute change in the number of unemployed, we find out how the number of unemployed has changed due to changes in individual factors (unemployment rate, economic activity rate, share of working age population in total population, total population):

$$\Delta_{U_{15-64}} = \frac{\log i_{u_{15-64}}}{\log i_{U_{15-64}}} * \Delta_{U_{15-64}} + \frac{\log i_{a_{15-64}}}{\log i_{U_{15-64}}} * \Delta_{U_{15-64}} + \frac{\log i_{p_{15-64}}}{\log i_{U_{15-64}}} * \Delta_{U_{15-64}} + \frac{\log i_{N_{0-100}}}{\log i_{U_{15-64}}} * \Delta_{U_{15-64}} \quad (6)$$

**Table 1:** Application of the influence of individual factors on the trend of the number of unemployed in individual EU countries in 2009 and 2018

Country	Indices				
	$i_{U_{15-64}}$	$i_{u_{15-64}}$	$i_{a_{15-64}}$	$i_{p_{15-64}}$	$N_{0-100}$
Belgium	0,7910	0,7545	1,0152	0,9743	1,0600
Bulgaria	0,7216	0,7666	1,0617	0,9391	0,9441
Czech Republic	0,3421	0,3383	1,0834	0,9171	1,0177
Denmark	0,8178	0,8045	0,9955	0,9735	1,0489
Germany	0,4526	0,4412	1,0302	0,9864	1,0096
Estonia	0,3926	0,3922	1,0694	0,9479	0,9876
Ireland	0,4699	0,4585	1,0050	0,9544	1,0684
Greece	1,8717	1,9907	1,0135	0,9583	0,9681
Spain	0,8363	0,8548	1,0110	0,9590	1,0091
France	1,0898	1,0392	1,0541	0,9566	1,0399
Croatia	0,8567	0,9064	1,0117	0,9807	0,9526
Italy	1,4409	1,3783	1,0442	0,9766	1,0251
Cyprus	1,6898	1,5566	1,0304	0,9716	1,0845
Latvia	0,3740	0,4229	1,0502	0,9416	0,8944
Lithuania	0,4264	0,4525	1,1060	0,9658	0,8822
Luxemburg	1,4103	1,0832	1,0449	1,0214	1,2199
Hungary	0,4115	0,3713	1,1753	0,9673	0,9748
Malta	0,7712	0,5377	1,2919	0,9590	1,1576
Netherlands	0,9010	0,8720	1,0250	0,9672	1,0422
Austria	0,9861	0,9134	1,0288	0,9914	1,0585
Poland	0,4659	0,4728	1,0417	0,9499	0,9958
Portugal	0,6998	0,7258	1,0192	0,9710	0,9743
Romania	0,5574	0,6035	0,9945	0,9721	0,9555
Slovenia	0,8656	0,8666	1,0426	0,9420	1,0170
Slovakia	0,5546	0,5479	1,0486	0,9545	1,0113
Finland	0,9081	0,9008	1,0372	0,9389	1,0351
Sweden	0,8377	0,7655	1,0509	0,9524	1,0933

**Source:** own processing in MS Excel based on data from Eurostat

Table 1 shows the development of the number of unemployed in the working age and the trend of the unemployment rate of the working age population, the economic activity rate of the working age population, the share of the working age population in the total population and the total population. We see that the unemployment rate decreased the most in the Czech Republic, namely by 66.17%, in Hungary by 62.87% and in Estonia by 60.78%, it increased the most in Greece by 99.07%, in Cyprus by 55.66 % and in Italy by 37.83%. The economic activity rate decreased only in Denmark, by 0.45%, in other countries it increased, most notably in Malta by 29.19%, in Hungary by 17.53% and in Lithuania by 10.60%. The share of the working age population in the total population increased only in Luxembourg by 2.14%, decreased in other countries, with the highest decreases recorded in the Czech Republic by 8.29%, in Finland by 6.11% and in Bulgaria by 6.09%. The total population increased the most in 2018 compared to 2009 in Luxembourg by 21.99%, in Malta by 15.76% and in Sweden by 9.33%, the largest decrease in Lithuania by 11.78%, in Latvia by 10.56% and in Bulgaria by 5.59%. In Slovakia, the unemployment rate of the working age population decreased by 45.21%, the economic activity rate increased by 4.86%, the share of the working age population in the total population decreased by 4.55% and the total population increased by 1.13%.

**Table 2:** Absolute change in the number of unemployed due to changes in individual factors in EU countries in 2009 and 2018 in thousand people

Country	Absolute change in the number of unemployed				
	$U_{15-64}$	$u_{15-64}$	$a_{15-64}$	$p_{15-64}$	$N_{0-100}$
Belgium	-79,3	-95,3	5,1	-8,8	19,7
Bulgaria	-65,9	-53,7	12,1	-12,7	-11,6
Czech Republic	-231,4	-233,8	17,3	-18,7	3,8
Denmark	-33,9	-36,7	-0,8	-4,5	8,1
Germany	-1 763,6	-1 820,6	66,2	-30,5	21,3
Estonia	-56,0	-56,1	4,0	-3,2	-0,7
Ireland	-153,9	-158,9	1,0	-9,5	13,5
Greece	421,9	463,4	9,0	-28,7	-21,8
Spain	-679,1	-595,9	41,6	-159,1	34,3
France	220,3	98,6	135,0	-113,6	100,3
Croatia	-25,5	-16,2	1,9	-3,2	-8,0
Italy	838,9	736,9	99,3	-54,4	57,0
Cyprus	14,9	12,6	0,8	-0,8	2,3
Latvia	-120,2	-105,2	6,0	-7,4	-13,6
Lithuania	-120,4	-112,0	14,2	-4,9	-17,7
Luxemburg	4,8	1,1	0,6	0,3	2,8
Hungary	-245,7	-274,1	44,7	-9,2	-7,1
Malta	-2,7	-6,4	2,7	-0,4	1,5
Netherlands	-37,4	-49,1	8,9	-12,0	14,8
Austria	-3,1	-20,0	6,3	-1,9	12,6
Poland	-752,7	-738,2	40,2	-50,6	-4,1
Portugal	-155,0	-139,2	8,3	-12,8	-11,3
Romania	-301,2	-260,3	-2,9	-14,6	-23,5
Slovenia	-8,2	-8,1	2,4	-3,4	1,0
Slovakia	-144,0	-147,0	11,6	-11,4	2,7
Finland	-20,3	-22,0	7,7	-13,3	7,3
Sweden	-66,1	-99,8	18,5	-18,2	33,3

**Source:** own processing in MS Excel based on data from Eurostat

Table 2 tells us how the number of unemployed of working age in individual countries of the European Union has changed due to a change in individual factors. We found that the number of unemployed in Germany decreased the most, by 1,763,600 persons due to changes in the unemployment rate of the working age population decreased the number of unemployed by 1,820,600 persons, due to the change in the economic activity rate of the working age population increased by 66,200 persons, due to changes in the share of the working age population in the total population decreased by 30,500 persons and due to changes in the total population increased by 21,300 persons. The number of unemployed of working age increased the most in Italy, by 838,900 persons, due to changes in the unemployment rate the number of unemployed increased by 736,900 persons, due to changes in economic activity rate it increased by 99,300 persons, due to changes in the share of working age population in total population decreased by 54,400 persons and due to changes in the total population increased by 57,000 persons. In Slovakia, the number of unemployed of working age decreased by 144,000 persons, due to changes in the unemployment rate the number of unemployed decreased by 147,000 persons, due to changes in economic activity rate increased by 11,600 persons, due to changes in the share of working age population in the total population decreased by 11,400 persons and due to changes in the total population increased by 2,700 persons.

## 5. CONCLUSION

From the realized analyses we can draw the following conclusions:

- The lowest unemployment rate of the working age population was in the Czech Republic in 2018, only 2.3% of the working age population was unemployed of the economically active working age population, 3.5% in Germany, Hungary and Malta 3,7%. The highest was in Greece 19.5%, in Spain 15.4% and in Italy 10.8%. In Slovakia, this indicator was at the level of 6.6%, which put our country in 18<sup>th</sup> place among the analysed 27 countries of the European Union;
- In 2009, the lowest unemployment rates of the working age population were recorded in the Netherlands (4.4%), Luxembourg (5.2%) and Austria (5.4%). The highest value of this indicator was in 2009 in Latvia and Spain, up 18.0%. In our country, the unemployment rate was at the level of 12.1%;
- In most countries, the unemployment rate decreased in 2018 compared to 2009, with the highest decrease recorded in Latvia (by 10.4 percentage points). In Slovakia, there was a decrease of 5.5 pp. A slight increase can be observed in France (by 0.3 pp) and Luxembourg (by 0.4 pp), the highest increase in Greece (by 9.7 pp). There has also been an increase in the unemployment rate of the working age population in Cyprus and Italy;
- In most countries there was a decrease in the number of unemployed in 2018 compared to 2009, while the highest decrease was recorded in the Czech Republic, namely by 65.79%, in Latvia by 62.60% and in Estonia by 60.74%. In Slovakia, there was a decrease of 44.54%. The number of unemployed increased by 87.17% in Greece, 68.98% in Cyprus, 44.09% in Italy, 41.03% in Luxembourg and 8.98% in France;
- The number of unemployed in Germany decreased the most, by 1,763,600 persons, due to changes in the unemployment rate of the working age population decreased the number of unemployed by 1,820,600 persons, due to changes in the economic activity rate of the working age population increased by 66,200 persons, due to changes in the share of the working age population in the total population decreased by 30,500 persons and increased by 21,300 persons as a result of changes in the total population;
- The number of unemployed in working age increased the most in Italy, by 838,900 persons, due to changes in the unemployment rate the number of unemployed increased by 736,900 persons, due to changes in economic activity rate increased by 99,300 persons, due to changes in the share of working age population in the total population decreased by 54,400 persons and increased by 57,000 persons due to changes in the total population;
- In Slovakia, the number of unemployed in working age decreased by 144,000 persons, due to changes in the unemployment rate the number of unemployed decreased by 147,000 persons, due to changes in economic activity rate increased by 11,600 persons, due to changes in the share of working age in the total population decreased by 11,400 persons and due to changes in the total population increased by 2,700 persons.

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# NEW CHALLENGES FOR PUBLIC ADMINISTRATION AT THE AGE OF THE RIGHT TO THE INTERNET ACCESS

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**Abstract:** *The paper discusses the challenges, benefits, and risks of the digitization in public services; argues the internet access right as a fundamental human right and the obligation of a state to provide digital services in the public administration; points out the main tasks of public administration when introducing the principles of good governance; addresses the development of the mentioned principles in the European public space as well at the examples of the Czech Republic. The authors critically describe evaluation methods of digitized public administration and e-Government, including the general model of user acceptance of information technology and benchmarking within the global worldwide information society. The paper highlights practical examples of digitization of the public space in the European Union and in the Czech Republic. The paper concludes with the issues of the state obligation to cover gaps between the legal and economic demand for digitization and provision of digital public services and needs of communities and individuals. The authors use the economic approach to examine legal issues of digitization in public administration. The comparison of the European legislation and Czech national legislation form the primary methodology of the interpretation of the rights of users as well as the obligations of the public administration. Practical examples, figures and tables highlight the argued issues.*

**Keywords:** *Digitization, Digital Single Market, Good Governance, Human Rights.*

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## 1. INTRODUCTION

The search for the best solutions for public administration management is a dynamic, open and permanent process. Finding the optimum model of the public administration management and functioning is a very complicated issue of current interest, which both the Czech as well as international administrative and legal study and practice has been, and still is, dealing with. This dynamic and ongoing process, during which, concerning the evolution of the society, state, and law in time and space, the economic, social and other aspects, the most appropriate form of public administration performance and its implementation is being searched for, including an efficient management model that would optimally fulfil all basic objectives and functions of public administration.

The path to forming the so-called Good Governance in terms of the final requirement for the dynamic behaviour of public authorities leads through the establishment of individual partial principles proceeding from the mutual relations between the government and the citizens, the general public and clients of the provided public services. The following need to be understood as the good governance basic values: access to justice, respect for the due process of legality, respect for human rights and democratic values, transparency, openness, participation, tolerance of diversity, environmental protection, the sustainability of results, and professionalism of public services (Agryriades, 2007, p. 22). These individual components of a “good governance” are

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the pillars of European administrative law. Application of these basic principles during the performance of public administration illustrates the shift from the traditional management models to a decentralized model. Concurrently, it influences the modernization processes, which are then inevitably directing their focus on the increase of quality of the provided services and further strengthening of the “citizen participation” principles.

Many international documents establishing the direction of development for the public administration within the European Administrative Space in this context acknowledge the enormous potential of the information and communication technology (ec.europa.eu). After all, that has always been one of the tools, which can make the performance of public administration more efficient. At present, when information technology plays a part in our daily lives and presents an aspect affecting all activities and policies, the demand for e-services is logically increasing both from the citizens, scholars, students and business entities. The Information Age thus inevitably challenges the public administration with new requirements. However, at the same time, it enhances its performance with the new quality in the form of modern electronic tools offering a variety of methods and techniques, which can be used in the process of its optimization, within the meaning of administrative work simplification and automation, acceleration and simplification of internal and external communication, lowering administrative costs and reduction of administrative risks.

## **2. E-GOVERNMENT CONCEPT AND GOALS WITHIN THE EUROPEAN ADMINISTRATIVE SPACE; E-GOVERNMENT EVALUATION METHODS**

Reflections on the use of information and communication technology in the sphere of public administration are summarized under the terms e-Government or e-Governance. Nowadays, these terms have become a part of the modern society newspeak to such extent, that there may not even be any attempts made to find an appropriate translation for them in any language. These terms can be defined as utilization of information and communication technologies (i.e. long-distance computer networks, Internet and mobile technologies, including PDA, SMS text messaging, MMS, Skype, WhatsApp as well as biometric identification systems or search systems), by the public administration to provide information and public services to the general public. Their ability to transform the relations between the public administration and the public is then considered to be a fundamental feature of these technologies. European Commission speaks of “*utilization of information and communication technology in the public administration intertwined with organizational change and new skills to improve public services and democratic processes, as well as to enhance the support of public services*” (European Commission, 2003. p. 4.). The Digital Agenda for Europe as a strategic document defining tasks in the sphere of e-Government for all EU member countries to be fulfilled by 2020 no longer sees information technology as „simply” a significant tool for improving the performance of public administration but understands it as a common part of societal life (digital\_agenda\_en.pdf, 2014, p.1-8)

There are two essential dimensions to the employment of eGovernment methods into practice. First, this means the transition from the traditional means of communication to those enabling network communication and digital data processing (e.g. Electronic Record Management, central registers, online filing, online access to information). Secondly, methods, which are primarily aiming at the increase in quality of the performance of administration, must be introduced. At the same time, the character of the administration, respectively, the way administrative acts are done, should change.

In connection with the introduction of information technology to public administration, the applicability of Davis's general technology acceptance model is often referred to, which is based on the so-called purpose-driven action (DAVIS, 1983. pp. 319-340). According to that model, an individual's attitude to the use of information technologies, and come to that, the actual use thereof, depends primarily on the user's perception of their usefulness and ease (complexity) of work. Rogers' diffusion of innovation theory (CARTER, BÉLAGER, 2005, p. 5-25) explains the success of adopting new technologies in real life in a similar way, and according to him, the following factors are the decisive ones:

- a) the relative advantage over the previous technology;
- b) the complexity of technology from the user's point of view;
- c) compatibility with the needs of those who are to use it;
- d) credibility and security.

It is then quite logical that the benchmarking the method used in EU for evaluation of the digital services development in individual member states is based on the assessment of 20 essential public services – 12 for the citizens and 8 for the businesses.

**Table 1.** Evaluated digital public services overview

Services for citizens	Services for businesses
<ul style="list-style-type: none"> <li>• Filing an income tax return for natural persons;</li> <li>• Job search services;</li> <li>• Application for social security benefits;</li> <li>• Application for and the issue of personal documents (identity cards, passports);</li> <li>• Registration of vehicles;</li> <li>• Application for building permit;</li> <li>• Reporting an offence to the police;</li> <li>• Public libraries services (online catalogues enabling reservations, notifications);</li> <li>• Obtaining so-called personal certificates (e.g. birth certificate, marriage certificate) or copies thereof;</li> <li>• Possibility to send an application to the university;</li> <li>• Notifications related to relocation;</li> <li>• Healthcare services.</li> </ul>	<ul style="list-style-type: none"> <li>• Social allowances for employees;</li> <li>• Filing an income tax return for legal entities;</li> <li>• Filing of Value Added Tax (VAT);</li> <li>• New company registration;</li> <li>• Submission of data for statistical offices;</li> <li>• Customs declaration;</li> <li>• Permits regarding the environment;</li> <li>• Public procurement (i.e. mainly public contracts).</li> </ul>

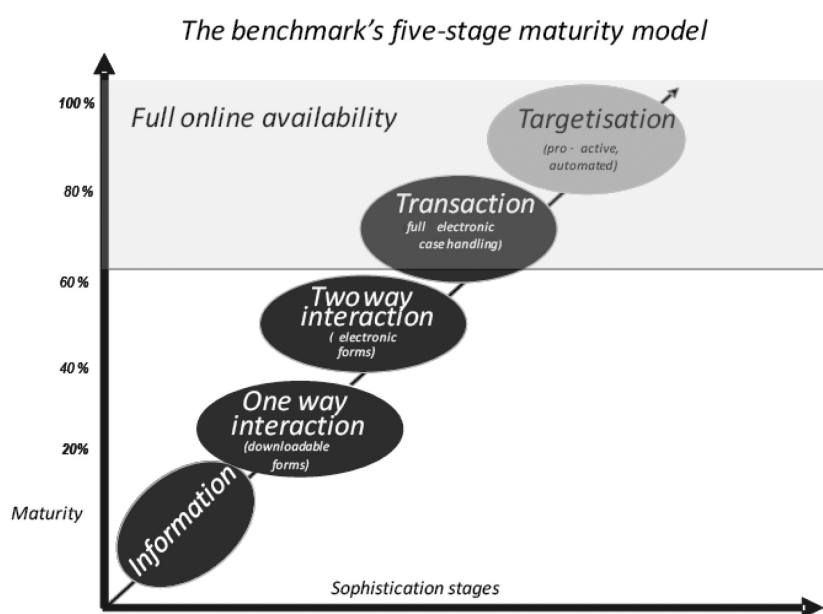
**Source:** [www.ec.europa.eu/information\\_society/europe/i2010](http://www.ec.europa.eu/information_society/europe/i2010)

For this assessment, we can define a digital service can as electronic activity satisfying particular collective needs. Its core lies in the remote access and utilization of long-distance electronic connection for obtaining a specific service. It should bring benefits to both interacting parties, i.e. to the user, as well as to the service provider. From the public administration authorities' point of view, these benefits can include lower number of employees, cost physical premises reduction, acceleration and simplification of the service delivery process, limited contact with the service consumer, guarantee of compliance with regulations and procedures, higher service consumer satisfaction and reduction in the error rate of the provided data. For the public administration services recipients, this means, that the user saves time with the increasing the quality of selected service and remote access.

Within the abovementioned benchmark, two fundamental aspects of the individual services are assessed by the European Commission (the so-called *5-stage maturity model*). The first one is *availability*, which determines whether the service is provided electronically, while this can

exist even in the form of instructions on how to deal with it. *Sophistication* is the second aspect, assessing the maturity of the given service according to the following levels:

- 1<sup>st</sup> Level – Information – there is at least a guideline on how to deal with the given service on the Internet;
- 2<sup>nd</sup> Level – One-way interaction – a form required for the provision of the service is available for download on the website;
- 3<sup>rd</sup> Level – Two-way interaction – electronic forms are available on the website with the possibility to fill them in and submit online;
- 4<sup>th</sup> Level – Transaction – represents the full provision of the given service in an online form, i.e. filling in and sending the required form (application), including the payment of administrative fees, enclosing attachments. This level means a maximum attainable evaluation for some services;
- 5<sup>th</sup> Level – Targetisation (or pro-active e-Government) – sending already pre-filled forms – used for the services such as tax return, census, or other statistical reports. This method requires the utilization of data from registers.



**Figure 1.** Maturity model and its specific scale

Source: EU: *eGovernment Benchmark Survey 2009*.

The above-stipulated objectives, together with evaluation reports and outcomes of scientific research projects and studies focused on the process of public administration digitization in a given country, should play a key role when it comes to the question of what tools and for what purposes should be implemented in the public administration.

### 3. OUTLINES OF E-GOVERNMENT DEVELOPMENT IN THE CZECH REPUBLIC

The path to the development of e-Government tools and methods in the area of public administration in the Czech Republic (CZ) had started in the early 1990s, when the technical conditions for the introduction of modern information technologies, which were previously available to a relatively small group of people, were created. In the beginning, modernization processes were characterized by a lack of knowledge, missing information and inadequate coordination during

the introduction of information technology into public administration practice. It was a trial and error rather than a strategic or systemic approach. The adoption of the strategy document National Information Policy - the Road to the Information Society (NIP) in 1999 presented a significant breakthrough in the sphere of information policy coordination, which was followed by the National Information Policy Action Plan with an outlook to the end of 2002. These activities were closely connected with the EU accession of the CZ. From main activities envisaged, we can mention that by 2002, operation of the selected digital public administration services was to be launched, aiming at minimum 10% of public administration interactions being made by digital means. In connection to the meeting of the set goals, an Act No. 365/2000 Coll., on Public Administration Information Systems was passed, establishing the Office for Public Information Systems. Creation of the Public Administration Portal was included among the main tasks of this office. However, this office was dissolved in 2002, and the scope of its authority was transferred to the Ministry of Information Technology in 2003. This department then became the chief coordinator of the development of the public administration digitization. After it has been dissolved, the tasks related to e-Government were taken on by the Ministry of Interior. Probably the greatest achievement of the Ministry of Information Technology was the launch of the Public Administration Portal on October 6, 2003. In the following years, the attention focused on direct access to information, also in connection to the e-Europe+ initiative, which included European standards in the area of universal electronic access to basic public services. In this context, in July 2004 the Ministry of Information Technology issued a document entitled "Best Practice - Rules for Accessible Website Creation" with recommendations regarding the creation of public administration websites. It defined the conditions for publishing information by remote access. Further, by the end of 2003, the Ministry of the Interior was to ensure the digitization of municipalities and by the end of 2006, the digitization of regions. These requirements were reflected in the Amendment to the Act on Public Administration Information Systems, which was passed to take care of the Public Administration Portal services development, of issuing verified outputs from the public administration information systems by a wider range of entities (e.g. municipalities, notaries, the Chamber of Commerce, postal services provider), as well as the availability of information on the individual public administration authorities websites. The said task, however, also required stricter requirements for the management of public administration information systems. In practice, this showed in the authorities' obligation to prepare a digital concept and operational documentation, the obligation to certify the systems, to introduce security measures. According to Act No. 227/2000 Coll., on Electronic Signature, e-filing offices became a mandatory part of the e-Government practice for the public authorities.

The procedural legislation underwent the required changes, too. In public administration, this meant namely the Act No. 500/2004 Coll., the Administrative Procedure Code, which brought digital records and files, remote access to the office notice board, electronic delivery, digital version of decrees and digital access when consulting a file. This regulation also triggered questions related to electronic document management across public administration entities. The so-called data boxes formed an essential innovation in the interaction between the citizen and public authorities. These were enshrined in the Act No. 300/2008 Coll., on Electronic Acts and Authorized Conversion of Documents. Concerning the digitization of public administration, it should be emphasized that this Act puts documents in written and electronic form on an equal footing and decrees data boxes to be the primary method of delivery of administrative and judicial documents. Legal entities registered in the Commercial Register, public authorities, lawyers, notaries are since that time legally obliged to receive public documents through data boxes. In 2011, the Ministry of the Interior started to work on the E-collection and E-legislation

projects, which were expected to be launched in early 2014, however, these projects are still in progress. Besides the government and central levels, attention was paid to the digitization processes in the area of digitization of municipalities and regions, i.e. the area of local and regional public administration. The Information Technology Commission was established under the Association of Regions in the Czech Republic, which later guaranteed the ePusa project (electronic portal for regional local administration) serving as an information point about the municipalities and territorial division of regions, including the individual administrative offices, not only for the regional local administration employees but also for the general public. In 2011, methodical guidance on the creation of municipal websites was created with the support of the Ministry of the Interior Department of Public Administration Information Technology. Subsequently, the EVA project (digitally friendly administration) was then aimed at the local (municipal) level. Its goal was to publish contact information from individual municipalities, both for the purposes of informing the general and business public, as well as for the purposes of solving crisis situations. The EVA project can be seen as the forefather of the present CZECHPOINTS, which have become a standard part of the daily performance of administration with positive responses from the citizens and civil servants alike.

Towns and Municipalities portal ([www.mool.cz](http://www.mool.cz)) has been running online since 1996. This portal includes basic information about regions, districts and municipalities, who can establish an official website here free of charge and publish their official notice board documents through the content management system.

#### **4. CURRENT TRENDS AND ISSUES IN THE PRACTICE AND RESEARCH**

In July 2016 the United Nations Human Rights Council adopted Resolution No. 38, the promotion, protection and enjoyment of human rights on the Internet. Though the resolution is not legally binding, the discussion on the human right to the access to the Internet and freedom of the use of the public virtual space has started. The EU has adopted many documents aiming to implement and support the Digital Single Market in public services and administration to create a modern and sustainable digital society respecting the rights of citizens (see <https://ec.europa.eu/digital-single-market/en>). The Czech Republic has adopted the Act on Digital Services No. 12/2020 Coll. This Act supports the citizen's right to get the electronic service from the public administration. The citizen is entitled, not forced, to use public services via the Internet. The digitization in the public administration contributes to the development of the rule of law and the state in action. General knowledge of modern technologies among both public officers and the user of their service is perfect. However, the digitized legal action must be very often confirmed either personally or by the legalized signature on a paper document. The Act on Digital Services aims to unify the fragmentary and diverse legal regulation and administrative practice because they mostly depend on local particularities and habits. Public servants very often do not use the same and unified approach to the digital service delivered to the public. Although the level of people's awareness about the possibilities of electronic communication with public authorities is increasing with the development thereof, and the tools through which this communication can be executed are multiplying. At the same time, we can speak about sufficient Internet availability for both the public administration authorities as well as its recipients, this form of communication is, at least from the perspective of the majority of ordinary citizens in the Czech Republic, overshadowed by persisting stereotypes. Because it is not meeting their subjective concepts and needs, it remains unused by them. The compulsory digitization may also bring the loss of a human face and very often could diminish human interaction in public

administration. There is the threat of possible social exclusion of vulnerable groups, depending on public services. Users of digital public services might be digitally illiterate, or they do not have appropriate access to the internet. The users also may not be able to operate modern technologies because of age or/and handicap. In general, however, the current legislation has been so far characterized by its fragmentation and particular focus, it creates a space in which several promising projects with considerable potential is starting as mentioned above.

Nevertheless, these are still wholly independent projects, which are difficult to apply in other areas of public administration. In this regard, there is also a topic for discussion about how much the principle of voluntariness should be suppressed when it comes to the digitization of public administration, and in particular the electronic communication. In this context, it can be postulated that the pressure exerted by newer laws regarding the mandatory use of electronic tools, without reflecting the real needs and wishes of their users, can often be counterproductive. The same applies to the speed, or, respectively, appropriate timing of the new e-tool implementation in practice. In this context, it is quite desirable to focus more on the quality when it comes to the digitization of public administration in the Czech Republic.

## 5. CONCLUSION

The Czech Republic is noticeably behind some European countries in up-to-date and most in-demand digital services provided to citizens. The COVID- 19 crisis proved that the state and its bodies, like for example social services, social security or public schools could switch to the underlying digital communication, but not to the long-term service provision on the digital basis. For the future development of e-Government in a broad sense, the state, when introducing new and developing existing electronic tools and services, should much more reflect the needs of the public administration recipients. The topical development showed that the services must meet the needs of daily life. Simultaneously, it should endeavour to overcome the existing barriers in electronic communication, i.e. to concentrate on informing people about the possibilities and ways in which they can interact with the public administration authorities electronically. Many of the existing barriers, concerning the current level of information technology development, are mostly psychological, and based on the of old practices and a user-unfriendly environment, rather than on technical or legal obstacles. It is necessary to apply the information technology potential in the external communication of public administration and not only as a tool of internal communication or management. Indeed, we can speak about genuine digital public administration only in the case that all the above-mentioned barriers are removed, and public officers, teachers, students and users generally no longer see the digitization as a „complementary or even nagging” service. Only then can be the much-promoted motto of the Czech e-Government fulfilled: „Data, not citizens will circulate.”

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# COMPETITION LAW IN DIGITAL ERA – HOW TO DEFINE THE RELEVANT MARKET?

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**Abstract:** *Competition law serves as an important tool for regulation of undertakings. In order to conduct a competition law analysis, one must first define the relevant market. However, this task is becoming more intricate in today's digital era, especially in relation to so-called zero-price markets. These markets are characterised as markets where users of products or services do not pay for the use, at least they do not pay by money. This paper asks how to define relevant market in such case. Three methods of relevant market definition are presented, namely qualitative analysis, SSNIP test and SSNDQ test. The paper briefly explores positive and negative elements of these tests and compares the findings with the European Commission's 2019 report. It leads to the answer that qualitative method might have certain advantages in this regard.*

**Keywords:** *Zero-Price Markets, United Brands, Qualitative Method, Characteristics Bases Method, SSNIP Test, SSNDQ Test, Digital Era Competition Policy.*

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## 1. INTRODUCTION

Competition law serves as an important regulatory tool. It may deal with economic issues and at times even with other legal and social issues (Mazúr & Patakyová, 2019). Compliance with this field of law is on the top of the list for many companies, especially those companies which are multi-national or have substantial turnover. The reason for this is simple – fines for non-compliance with competition law may rise to hundreds of thousands of euros, even millions in some cases.

Within EU law, competition law covers several different practices. First, it covers agreements between undertakings, regulated by Article 101 Treaty on Functioning of the European Union (“TFEU”). Such agreement may take place between two (or more) undertakings on the same level of production. These agreements, often referred to as cartels, include agreements on sell price (price cartels), market share agreements, or cartels within tendering procedures (bid rigging). Article 101 TFEU also covers agreements between undertakings on different types of production, e.g. an agreement between a producer and a distributor. These agreements are named as vertical agreements. Second, Article 102 TFEU prohibits abuse of dominant position, such as refusal to supply, or trading on discriminatory conditions. Third, EU competition law covers mergers which are regulated by Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings. Every merger or acquisition, meeting the criteria stated therein shall be cleared by the European Commission before it takes place. Fourthly, EU law also regulates state aid which is provided by member states of the EU to undertakings.

All these practices, the first three in particular, are dependent on the definition of relevant market. As put by Pike (2017) “a traditional starting point for framing an analysis of the competitive effects

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of a merger, an action or an agreement is to define the relevant market(s)” (p.5). The definition of the relevant market determines, whether an agreement will meet *de minimis* limits, whether an agreement will be exempted by general block exemptions regulations, whether an undertaking will be in a dominant position, or, to substantial extent, whether a merger will be allowed.

This core-stone of any EU competition law analysis have been put under test. Digital economy, with many of its specialities, leads to the difficulties in application of traditional methods of relevant market definition. Some scholars call for introduction of a new method, which would be more suitable for digital markets, zero-price markets in particular.

Thus, the paper aims to explore the following question: how to define the relevant market in zero-price circumstances and which of the three analysed methods seems to be the most suitable one? In order to answer the question, the paper presents two traditional methods for relevant market definition, qualitative method and SSNIP test, supplemented by outlining of one relatively new method, SSNDQ test. This goes without saying that there exist also other methods, such as “multi-layered approach” (Periera Neto & Lancieri, 2020, p. 55). Each of these methods will be assessed from the perspective of whether the method meets the needs of digital market, zero-price markets in particular. As the scope of this paper is limited, there is no room for an exhaustive analysis. Therefore, the paper presents an outline of the assessment. Such findings are compared with a report published by European Commission in 2019 focusing on application of competition law in digital era.

Therefore, the paper is organised as follows. First, zero price markets are briefly presented. Second, each of the three methods of relevant market definitions are outlined and their pros and cons are pointed out. Third, the findings will be compared with emerging trends, namely a study published by European Commission in 2019. Last but not least, concluding remarks will be presented in the conclusion.

## **2. ZERO-PRICE MARKETS**

Zero-price markets are those markets in which we cannot find any direct financial transaction between a seller or a service provider and a customer. A common example of zero-price markets are social networks. Common users do not pay for using of social networks, such as Facebook, Twitter, or Instagram. This goes without saying that certain users pay for certain transactions, mainly advertisers.

However, the absence of financial transaction does not mean that these markets are completely free. As pointed out by Newman (2015), buyer-seller exchanges are similar to those in traditional markets, as “firms find it profitable to exchange zero-price products to customers in exchange for their attention or information” (p. 174). Attention, as a form of currency, is based on the fact that providers of zero-price products compete vividly for users to use them (Newman, 2015, p. 176). In theory, users may use indefinite number of social networks at once, however, they will scarcely do so, as they have only limited amount of time to spare. There are even suggestions that multi-homing decreases advertisers’ willingness-to-pay (Liu, 2020). Therefore, if users bring money to social networks by creating a space to advertise, the more users are on the social network, the more profitable that social network is.

The other currency paid by users on zero-price markets is information costs, as put by Newman (2015, p. 165), or simply data, as put by, for instance, Cooper and Mason, (2013, p. 1130), Körber (2018, p. 4),

or Colangelo and Maggiolino (2018, p. 13). Social networks, and other providers on zero-price markets, benefit largely from data disclosed to them by users. For instance, data may be acquired from users “to assist advertisers to better target them with behavioural ads” (Stucke & Grunes, 2016, p. 37). Although, as stressed by Botta and Wiedemann (2018), these users “benefit from data disclosure, too, since they can enjoy personalised and better services” (p.22). Data leads us to the problematic of big data, which has been a hot topic of discussion among scholars for several years.

Big data has commonly been characterised by four Vs: the volume of data; the velocity at which data is collected, used and disseminated; the variety of information aggregated; and finally, the value of data (Ezrachi & Stucke, 2016, p. 15).

Big data have significant impact on how business is done in digital markets, zero-price markets in particular, as there is a high incentive to use this type of currency which is harvested from users and monetised in some manner. Naturally, there are regulations applicable to gathering and processing of personal data, especially Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), however, many users are not aware of the extent of the data being harvested, they do not make rational choices in this regard and they are very diverse as to their privacy preferences and privacy behaviour (Kerber, 2016, p. 859).

There are other distinctive features of zero-price markets. For instance, they are often also multi-sided markets (Kerber, 2016, p. 860). In these markets, or platforms, network effects apply to great extent; as put by Lianos (2019) “the platform is a match-maker” (p. 72). Direct network effects are easily understandable on the example of telephone – the more persons have telephone, the more persons one can call (Stucke & Grunes, 2016, p. 162). Indirect network effects occur when the benefit of group A (on one side of the platform, e.g. advertisers) depend on the number of group B (on the other side of the platform, e.g. active users of the platform) (Preta, 2018, p. 4).

Moreover, zero-price markets are not easy to enter. This may come as surprise, due to the fact that basically anyone can create a new Facebook. Typically, barriers to entry are, for instance, legal barriers, economies of scale, control of an essential facility, superior technology, access to international capital market, sales network, brand image, costs and network effects (Whish & Bailey, 2012). Due to the presence of strong network effects, multi-side platforms, included zero-price markets, may be difficult to enter; this may be supported by presence of data qua entry barrier (Stucke & Grunes, 2016, pp. 158, 162)

### **3. RELEVANT MARKET DEFINITION - QUALITATIVE METHOD**

Relevant market definition is a tool to identify and define the boundaries of competition between undertakings. It is defined from the product perspective, geographical perspective and, when needed, also from time perspective (Craig & De Búrca, 2011, p.1012).

*The objective of defining a market in both its product and geographic dimension is to identify those actual competitors of the undertakings involved that are capable of constraining those undertakings' behaviour and of preventing them from behaving independently of effective competitive pressure. It is from this perspective that the market definition makes it possible inter alia to calculate market shares that would convey meaningful information regarding market*

*power for the purposes of assessing dominance or for the purposes of applying Article [101 TFEU] (Commission, 1997, para 2).*

Three elements are usually assessed when market definition is at stake: demand substitution, supply substitution and potential competition. Although all these elements are significant, due to the limited scope of this paper, we will focus mainly on the demand substitution, which is considered to be the most important element (Whish & Bailey, 2012, p. 31).

What is named as qualitative method in this paper is basically the relevant market definition based on distinctive characteristics of products and territories. It was properly described in the case of the European Court of Justice 27/76 United Brands Company and United Brands Continental BV v Commission of the European Communities (“**United Brand case**”). The question was whether bananas are a separate product market, or whether they belong to fresh fruit market. In this regard, the Court of Justice ruled that bananas dispose of certain characteristics which are not present to similar extent in any other fruit, namely appearance, taste, softness, seedlessness, easy handling, a constant level of production and satisfying the needs of very young, old and sick. Similarly, the geographic market was assessed from the perspective of its homogeneousness. The differences in the conditions of competition between the relevant geographic market and the rest of the EU (ECC at that time) were analysed, such as customs duty or import agreements (a common organization of the agricultural market in bananas was not established at that time). The outcome was that three member states were excluded from the relevant geographic market and the rest of members states formed the relevant geographic market.

Advantages of this qualitative analysis are various. First, the method is available also for such markets where hard data is not available. Second, it is often forgotten that competition law analysis is not done only by the Commission, but also by undertakings themselves, especially when they are planning to adopt a practice which might be problematic where they assessed as dominant undertaking. These undertakings may not have personal and time capacity to gather enough data for the SSNIP test discuss below. Three, certain disadvantages of the SSNIP test may be prevented by this test. An example of this is cellophane fallacy (Whish & Bailey, 2012, p. 32). Four, in order to apply the method, there is no unavoidable need to have price transactions being held on the market. On the other hand, disadvantages of this method are numerous. First, the test is quite subjective, as the interchangeability of products or homogeneousness of territories depend on the criteria which are chosen or users which are asked. Second, due to this subjectivity, it may be difficult to establish which definition of the relevant market is the correct one.

#### 4. SSNIP TEST

A method which may be described as more quantitative is the method named as SSNIP test. The test uses a question whether customers of the undertaking at stake switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase in the products and areas being considered (Commission, 1997, para 17). If this small but significant non-transitory increase in price (SSNIP) leads to so many switches to make the price increase unprofitable, additional substitutes and territories are added to the relevant market and the SSNIP test is repeated, until the increase is profitable.

The advantages of the SSNIP test are clear. First and foremost, data are supposed to be objective, meaning that the test should lead to undisputable definition of relevant market. Second, it may be

used for certain types of zero-price markets, if the zero price is only one element of the total price of transactions on multi-sided markets; zero price in one market does not prevent the definition of the price on the interrelated market (Pike, 2017, p. 7). Third, to apply the SSNIP on multi-sided markets is tricky, but not always inappropriate (Lianos, 2019, pp. 73-75).

To mention but few disadvantages, it is fairly difficult to obtain relevant data. Next, interpretation of the same data by two persons does not have to be the same, which takes away the objectivity factor of the test. This is related to other factors which must be taken into account, such as network effects, which may deform the profitability concept within the SSNIP test (Pike, 2017, p. 8). Furthermore, to perform such test requires substantial personal, time and material resources. Last but not least, this test is possible only in price markets and, therefore, will not be usually open for zero-price markets (or the zero-side of the multi-sided markets). The workability of the test in multi-sided markets is generally problematic (Pereira Neto & Lancieri, 2020, p. 13).

## 5. SSNDQ TEST

In order to eliminate the last disadvantage of the SSNIP test, there is another test which may be employed. Instead of measuring increase in price, the SSNDQ test measures small, but significant non-transitory decrease in quality. This test is not brand new. It was suggested more than 25 years ago by Hartman, Teece, Mirchelle and Jorde (1993). Although the decrease in quality may be just as noticeable for consumers as increase in price, its measurement is far more complicated (OECD, 2013, p. 12).

There are several plus sides of the SSNDQ test. First, it may be employed in markets where SSNIP test is not available, such as zero-price markets. Moreover, it may work also for markets where there is a price available, yet it is a competitive price. These are, for instance, regulated markets where prices are regulated and the competition is diverted to quality and marketing (OECD, 2013, p. 157). Second, the lack of objectivity in some cases may be balanced by taking into account several measurable elements (Stucke & Grunes, 2016, p. 118).

Naturally, there are flaws of the test too. First, without well-accepted quantifiable measures of quality, the test is useless (Stucke and Grunes, 2016, p. 117). Second, there is still need for fairly large amount of data. Workability of the test is challenged in practice (Pike, 2017, p. 7). Third, even if data are available, the decrease in quality may be still subjective. For instance, is development of a social network regarding its functionality an increase of quality (due to adoption of new functionalities), or is it rather a decrease (due to higher complexity of the application)? Fourth, in order for the test to function, the consumers must be able to notice the decrease and act accordingly. This is not always feasible, as the decrease in quality may be subtle (Stucke & Grunes, 2016, p. 120). An example may be changing of privacy terms or other terms and conditions. Fifth, under the prism of behavioural theories, will users change their behaviour even if they sense the decrease in quality?

## 6. FUTURE RESEARCH DIRECTIONS

The few reflections presented above are definitely not exhaustive. To list a complete list of particular methods' pros and cons is well beyond the scope of this paper. However, what may be done is to assess these reflections in light of the Commission's report competition policy for the digital era (2019). The Commission's report (2019) well acknowledges that, in multi-side mar-

kets, such as digital markets, not all benefits are reflected in prices and certain side of may be non-paying, or paying in a non-monetary for of consideration (pp. 43-44). Regarding the SSNIP test and SSNDQ test, both of them are seen as unsuitable for a simple reason – they are not fit for multi-sided markets. In particular, one cannot have a proper model of increasing of price on one side and decreasing it on the other (Commission, 2019, p. 45). Further, regarding the SSNDQ test, the Commission agrees that it is difficult to apply in practice (Commission, 2019, p. 45).

Within the executive summary of the report, the Commission stated that, due to the unclear boundaries between market definition which are rapidly changing, presence of multi-sided platforms, “we should put less emphasis on analysis of market definition, and more emphasis on theories of harm and identification of anti-competitive strategies” (2019, pp. 3-4). However, what is not clear from the report is, how the currently indispensable position of the relevant market definition within the competition law analysis should be replaced. Therefore, it seems that market definition is not completely substitutable, however, the quantitative methods, i.e. the SSNIP test and SSNDQ test would be of more advisory nature and the qualitative analysis would probably become more and more dominant. There remains a room for further research whether this assumption will be proven.

## 7. CONCLUSION

The definition of the relevant market is the cornerstone of EU competition law analysis as we know it today. The quantitative methods for its definition, namely the SSNIP test and the SSNDQ test, face a challenge in this digital era. Together with the qualitative method, advantages and disadvantages were shortly outlined. The paper aimed to highlight that none of the method is perfect and that the strong sides of one method may be balanced by weak sides of another. These short finding were compared to what was established by the European Commission in its 2019 report. It seems that the Commission is well aware of the fact shortcomings regarding the relevant market definition and proposes to focus more on the theories of harm and indication of anti-competitive strategies. This may well be so, however, the need for market definition is not excluded. Therefore, what seems to be a feasible solution is to put more emphasis on the qualitative method of the relevant market definition, possibly backed-up by as many empirical and objective evidence as possible.

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# SMART CITY: SMART NAVIGATION IN HOSPITALS

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**Abstract:** *The presented paper deals, in theoretical and conceptual terms, with one of the Smart solutions in the concept of Smart City. A smart solution can be defined as an innovative and functional approach towards solving situations in a responsible way and with positive consequences for society. These smart solutions are the core of the Smart City concept which, together with a smart region, present a new economic area where new markets or market segments offering innovative and intelligent (tangible and intangible) solutions for said cities and regions are developed. Specifically, the paper deals with the description of existing and innovative navigation systems in hospital buildings. Emphasis is placed on the analysis and comparison of indirect, explicit effects related to individual ways of navigation in hospitals. Knowledge of these effects, or their monetary quantification, is a key factor in assessing the effectiveness of the innovative solution and thus forms a specific input attribute in the decision-making process on implementation or rejection of such an implementation proposal.*

**Keywords:** *Smart, Navigation, Hospitals, Indirect Effects.*

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## 1. INTRODUCTION

Smart cities are a topic whose key importance is increasingly being recognized across both academic disciplines and urban planning. The idea of a smart city is a dream of urban planners all over the world, and a subject of many research and business initiatives as well as policy debates (Borsekova et al., 2018). The Smart City concept is currently an accented approach to that we would like to use to refer to the use of highly sophisticated analytical methods, approaches, communication methods and techniques for proposing aims, approaches and plans involving the whole field of transfer of smart solutions into tangible and intangible innovations in a particular locality (Turečková & Nevima, 2020). The core of the concept is to transform the city into a dynamically developing city based on its sustainable economic development, and on the basis of its quality of life underpinned by effective usability of human and social capital as well as modern information and communication technologies (Turečková & Nevima, 2018). In this context, we deal with the territorial implementation of individual smart solutions which represent an innovative and working approach to developing solutions for various situations in an appropriate and socially positive way (Borsekova et al., 2017). Smart solutions must make cities more humane and not just technologically advanced (Slavík, 2017). This applies to the search for a suitable hospital navigation system that must be both economical and socially efficient, rational and acceptable to its visitors.

The aim of this article, based on theoretical and conceptual resources, is to provide a description of existing and innovative navigation systems in hospital buildings. This objective is expanded

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to include an analysis of indirect effects in particular, whether positive or negative, resulting from the respective navigation types. A desirable and appropriate type of navigation should be characterized by its acceptability for as many people as possible, its simplicity, economic and social efficiency and resistance to various risks to damage this type of navigation. The essence of navigation is (1) planning a way (ex-ante) to the desired location or (2) directing us (right now) to the final destination. These approaches to navigation can be solved separately or combined into one. In this paper, we will discuss navigation inside hospital buildings.

Hospitals are typically large, complex and dynamic evolving spaces, which are being regularly reconfigured and extended as operational needs shift and change, often resulting in a confusing, non-systematic layout (Li et al., 2015). That is why navigating in large hospitals is a challenging task (Anagnostopoulos et al., 2017). Given the diversity of hospital visitors and hospitals themselves, these hospital navigations must satisfy a range of individual needs of regular and occasional patients, staff, attendants and others, in the context of their cognitive and spatial abilities (Mollerup, 2009 or Allen et al., 1996). Appropriate navigation reduces time delays in finding a suitable place (surgery), reduces insecurity and stress (especially for the elderly), appropriately directs the distribution of large numbers of visitors in buildings into their individual parts, etc. This creates a number of positive externalities and effects that are desirable for society.

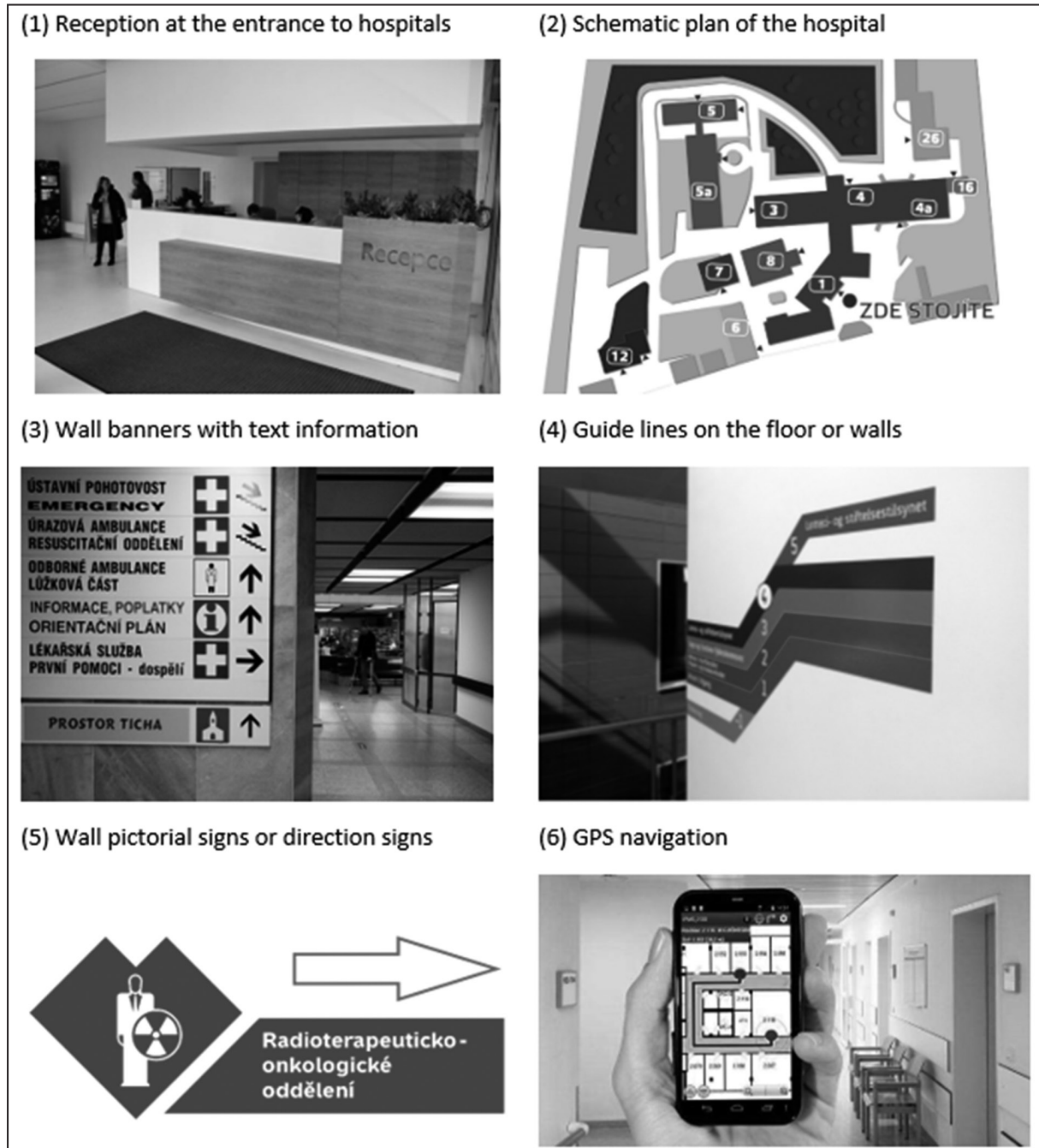
Common types of hospital navigation include reception at the entrance or personal assistance, (colored) guidelines on the floor or walls, wall panels with information, schematic plans of the building, signs assigned to individual medical departments, QR codes on the walls, special screens on glasses that show you the current direction (similar to 3D glasses), etc. GPS navigation is currently being promoted. There is in the preparation phase also individual navigation through direct identification of the person (patient), who then shows them the way to the surgery through the LCD screens placed in the corridors of the hospital.

## **2. METHODOLOGY AND THE USUAL TYPES OF NAVIGATING IN HOSPITALS**

From the methodical point of view, the article is conceived on literature search, the secondary search of individual types of navigation and their short description, induction of indirect benefits and costs of individual types of navigation. As was written previously, emphasis will be placed on the analysis and comparison of indirect, explicit effects related to individual ways of navigation in hospitals. Knowledge of these effects, or their monetary quantification, is a key factor in assessing the effectiveness of the innovative solution and thus forms a specific input attribute in the decision-making process on implementation or rejection of such an implementation proposal. Emphasis is placed on the analysis and comparison of indirect, explicit effects related to individual ways of navigation in hospitals. Knowledge of these effects, or their monetary quantification, is a key factor in assessing the effectiveness of the innovative solution and thus forms a specific input attribute in the decision-making process on implementation or rejection of such an implementation proposal. The output will be clearly arranged into a table in a simple form so that it can be transferred to practice, especially as a basis for the preparation of a relevant CBA.

Many authors (Anagnostopoulos et al., 2017; Boonyachut et al., 2012; Devlin, 2014; Hughes & Brown, 2015; Pati et al., 2015 or Lee et al, 2014) for example mention the following types of commonly used navigation in hospital: (1) through an employee (reception, personal assistance); (2) schematic plants of the hospital (the map of the hospital complex is color-coded according to

individual departments); (3) wall banners with hospital department labels and the direction they are located; (4) guidelines on the floor or walls (usually color-coded by hospital department); (5) wall pictorial signs or direction signs to each the hospital department and (6) GPS navigation in the context of smartphone application. All of the hospital navigation options presented are shown in Figure 1 in the form of pictures.



**Figure 1.** Selected types of navigation in hospital

**Source:** (1) <https://m.mb-net.cz>; (2) <https://nemocnicenovyjicin.agel.cz>; (3) <https://plzen.rozhlas.cz>; (4) <https://www.stavbaweb.cz> (modified) (5) <https://www.chrochtik.cz> (modified); (6) <https://phys.org>

Smart hospital navigation will be one that is cost-effective in terms of the first investment and other operating costs. Smart navigation must be clear and understandable at first glance, leaving no doubt about navigation to the target destination and thus satisfies most people. In the next

part of the paper, individual types of these navigations will be analyzed according to social indirect effects and acceptability for individual groups of people. It can already be said that smart navigation should be an appropriate combination of all the above-mentioned types in order to reflect the needs and health of different patient groups (children, young people, old people, low vision, poor mobility, people with “susceptible, sensitive” diseases (cancer patients, psychiatric visitors, incurable patients ...), etc.).

### **3. ANALYSIS OF SOCIAL INDIRECT EFFECTS OF SELECTED TYPES OF NAVIGATIONS IN HOSPITALS**

At this point in the paper, we will try to summarize the benefits and costs of individual types of navigation used in hospitals based on the research of secondary sources and our own experience in the field of indirect effects.

The reception allows personal contact of the visitor with the employee who should have all the partial competencies to navigate the people in the hospital (especially the ability to explain the way simply and precisely) (Hughes & Brown, 2015). Personal form of communication is generally preferred by the elderly. The advantage is an immediate professional information service for visitors who can get more information than the localization of the department of surgery. This form of navigation entails the cost of paying for receptionists and, in the case of a large number of visitors, downtime. This form of navigation is inversely proportional to the explanatory skills of the receptionist and the complexity of the hospital complex.

Schematic plan is most often found at the entrance to the hospital. From this point of view, it is problematic to find your way to the required department. The visitor may be afraid that he will not remember the way. Usually, too, the plans are general, only schematic, with text explanations on the sides. Orientation in them can cause difficulties for some groups of the population (Devlin, 2014). Updating these schematic plans is also difficult and costly. Therefore, it is advisable to use these schematic plans only in combination with other navigation systems. Together with them, the schematic plans of the hospital premises can be evaluated positively as the initial information about the hospital's orientation.

Wall banners with text information are often found at the entrance to the hospital and are combined with wall (pictorial) direction signs on the walls in many places in the hospital (Rodrigues et al., 2019). Separate text banners can be found as confusing and the description of navigation could be inaccurate and simplified. Again, there is a problem with remembering the way. Text banners on the wall can be undesirable navigation for purblind visitors or some other group of patients who then have to ask for directions anyway. The way the memorability problem is solved by steady direction signs on the hospital walls. In this case, there is a possibility to overlook this marking or confusion with another department. For pictorial signs (symbols), the problem is the same as the risk of confusing images from different departments (Rousek & Hallbeck, 2011). There is always a risk of poor placement of signs at critical points in the hospital. On the other hand, this type of navigation and its possible adjustment is inexpensive.

Guide colored lines on the floors or walls are possible to compare to tourist signs (in the Czech Republic and some other countries). Each hospital ward is assigned by a unique color, the lines drawn are at the beginning (sometimes even during) accompanied by a textual designation of the ward (Rodrigues et al., 2019). This type of navigation continuously guides the hospital visi-

tor from the entrance hall to the desired department (just stick to the desired color and follow it). This type of marking is cheap, but if it is placed on the ground it needs to be renewed. The main problem in the use of colors can be the lack of consistency in their use (Rooke et al., 2009). This type of navigation is not suitable for color-blind (unless a specific texture is added to the color). Confusing may also be the use of too many color bars. Optimizing the number and choice of colors is crucial. The use of elevators may be confusing, where it is necessary to supplement the guidelines with another type of navigation.

GPS navigations in hospitals are dependent on the application of ICT to smart mobile phones (Anagnostopoulos et al.2017 or Marshall, 2017). At the same time, it is highly sensitive to GPS signals, which may be restricted in buildings. The use of GPS navigation also encounters the cognitive and technical skills of different groups of people, especially the older generation rejecting this type of navigation. This type of navigation is not intended for people without mobile device equipment. GPS navigation needs to be linked to the internal structure (map) of the hospital, so it is necessary to constantly update the mobile application of the hospital system. On the other hand, a suitable GPS navigation application can reflect the specific needs of the patients (wheelchair users, weak-sighted ...) and adapt the route to the ward (or voice navigation).

**Table 1.** Summary of indirect effects of individual types of hospital navigation

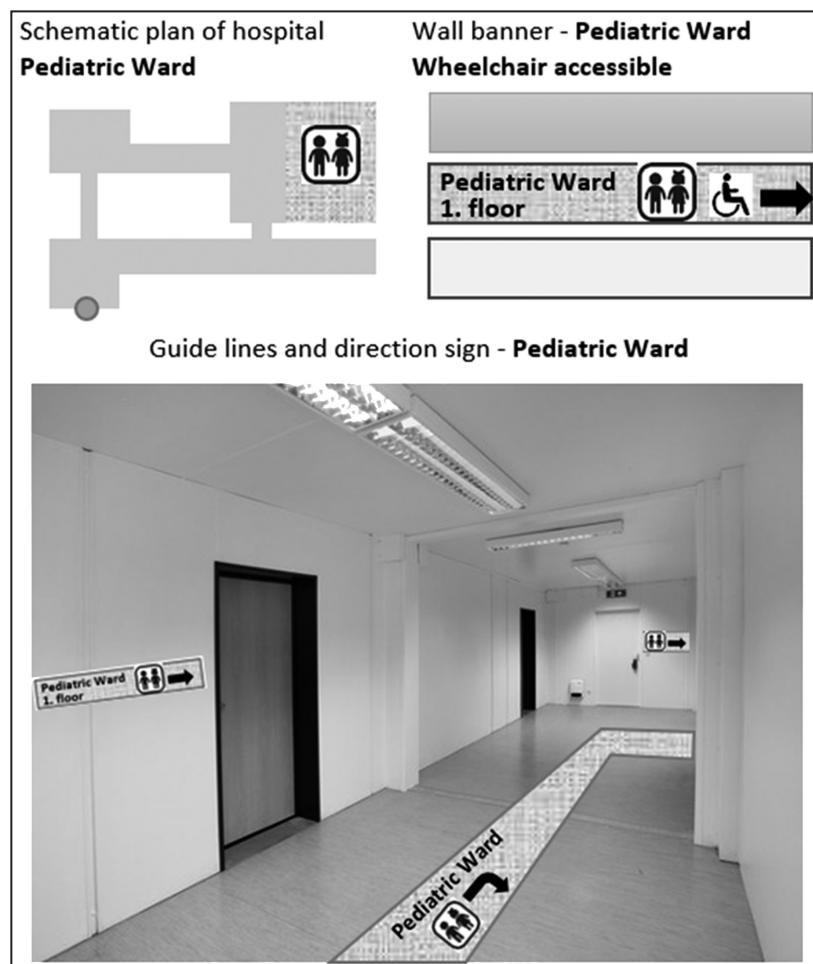
Type of navigation	Negatives	Positives
<b>Reception (personal contact)</b>	<ul style="list-style-type: none"> <li>incompetent workers (downtime (queues), wrong explanation...)</li> </ul>	<ul style="list-style-type: none"> <li>synergy of information</li> <li>the social benefits of personal contact</li> </ul>
<b>Schematic plan</b>	<ul style="list-style-type: none"> <li>the general design of the plans is only indicative (inaccurate in detail)</li> <li>concerns with remembering, uncertainty, asking, downtime</li> </ul>	<ul style="list-style-type: none"> <li>as a complement to other navigation methods</li> <li>initial awareness of the disposition of hospital spaces</li> </ul>
<b>Wall banners with text information</b>	<ul style="list-style-type: none"> <li>possible text confusion</li> <li>the need for immediate memorization (uncertainty)</li> <li>verification of information</li> </ul>	<ul style="list-style-type: none"> <li>a general overview of the hospital structure</li> <li>as a good complement to other navigation methods</li> </ul>
<b>Guide (colored) lines (floor, wall)</b>	<ul style="list-style-type: none"> <li>determining the appropriate number of color lines and choosing colors</li> <li>problems for color blind people and elevator using</li> </ul>	<ul style="list-style-type: none"> <li>uninterrupted navigation</li> <li>simplicity</li> <li>for Czech citizens the traditional way of navigation in the terrain</li> </ul>
<b>Wall pictorial and direction signs</b>	<ul style="list-style-type: none"> <li>badly selected pictogram</li> <li>easy replacement of pictograms or direction signs</li> <li>oversight of signs</li> <li>inappropriate location of signs</li> </ul>	<ul style="list-style-type: none"> <li>as a good complement to other navigation methods</li> <li>continuous navigation</li> <li>suitable pictogram replaces written text (foreign-language visitors)</li> </ul>
<b>GPS navigation</b>	<ul style="list-style-type: none"> <li>full dependence on ICT and availability of GPS signal</li> <li>continuous updating of the navigation mobile application</li> </ul>	<ul style="list-style-type: none"> <li>direct and immediate navigation to the location</li> <li>full visitor autonomy</li> </ul>

Source: Authors, 2020

Anagnostopoulos et al. (2017) in their study found out which types of navigation seem appropriate to respondents. Best turned out option with volunteers who help people in way-finding, then the colored lines on the floor and smart mobile applications offering location information. In other places, they were interactive screens, landmarks (photos or paintings) and signs. According to respondents, these means of localization should be improved the most.

#### 4. CONCLUSION

A truly Smart City uses innovation to provide critical services to the resident in a cost-effective manner (McClellan, 2019). The Smart City concept is based on an active smart approach to dealing with any undesirable situation. The result of applying a Smart approach should thus be to make a smart decision and to find a smart and functional solution for a given problem). The Smart solution may not be wholly new but maybe an existing solution complemented by innovative features (Turečková & Nevima, 2019). Navigating around large hospitals is often a major source of anxiety, frustration, and stress for those visiting and working here (Hughes et al., 2015). It also has significant and direct “cost” implications in terms of missed appointments whilst also putting an overall strain on staff time and resources in guiding others (Martins & de Melo, 2014). In the case of our article, current and most frequently used possibilities of navigation within hospitals were analyzed in terms of their selected social effects. Now, based on the above analysis, we will try to design a smart solution that reflects the positive effects and eliminates the negative effects. This can be achieved by a suitable combination of partial navigation solutions.



**Figure 2.** Proposed smart navigation in hospital

**Source:** Authors

Appropriate hospital navigation can combine a hospital scheme (plan) with wall text banners where each department will be represented by a unique color and pictogram (simple picture). The guidelines on the floor or walls or direction indicators on the walls will also be marked as well (color and pictogram) accompanied by a textual designation of the hospital department.

Such a navigation system combining color, text, pictogram and directional sign (including schematic plans for each department with the location where you are) is understandable to most visitors and, when sufficiently and appropriately applied in the hospital, allows visitors to navigate comfortably their destination. The navigation system can also be supplemented with a barrier-free access sign or signs indicating stairs or elevator. In addition to this navigation system, a reception can also be recommended to provide visitors with the assurance that they understand the hospital navigation system.

The use of ICT technologies, especially at present GPS navigation can be delivered as a complementary, independent system of hospital navigation. As technology advances and ICT literacy of people continue to grow, modern navigation systems based on the use of different ICT tools and technologies can be expected. The classic navigation in hospitals should then be maintained too. It has a parallel in tourist marking in our territory (Czech Republic), which began to use around 1884. Although GPS navigation, online maps, and various mobile applications have been established in tourism for many years, this traditional tourist marking is for its universality, simplicity, and permanency still the most wanted. Who would still like to look at a screen?

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# DETERMINING FACTORS OF CZECH FILM ATTENDANCE IN THE YEARS 2003–2017

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DOI:

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**Abstract:** *The paper analyzes the determining factors affecting Czech film attendance in the years 2003–2017 and places this topic into the context of the information asymmetry faced by film-goers. Using the regression (OLS) model and a unique population-level dataset (415 observations), the hypothesis of a positive relationship between film attendance and audience rating is confirmed. The increase in audience ratings by Czech-Slovak Film Database website's users by one percentage point is, ceteris paribus, associated with an increase in attendance by 1.8%. Factors which have proven to determine film attendance also include: specific genres; film sequels; casting of a popular actor, actress or director; the personality of the director Zdeněk Troška; the Czech Lion Awards; and a premiere in certain years. In the decision-making process of a viewer who faces information asymmetry one can rely on these determinants as economic signals and on viewer ratings as information from an intermediary.*

**Keywords:** *Film, Experience good, Signaling, Information asymmetry, User rating, Decision-making process.*

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## 1. INTRODUCTION

This article will deal with a relatively little mapped film market environment. Its significance lies not only in the great popularity of film as a consumer good, but also in the economic nature of film as the so-called *experience good*, for which the consumer's benefit reached by consuming it is not known in advance. This creates an environment of information asymmetry in the film market. Economics is able to find the means and tools through which consumers cope with the information superiority of filmmakers - economic signaling and information provided by a third party (specifically, viewers' ratings of a given film by users of specialized Internet sites). The aim of this article is to confirm the importance of viewer ratings in the consumer's decision-making in selecting a given film through the econometric model, the ordinary least squares (OLS) method. Specifically, the attendance of all Czech films made in 2003–2017 will be modeled and a unique dataset will be used at the level of the population sample (415 observations). This model will also find other important determinants of the attendance of Czech films and factors that influence the decision-making process of the viewer.

## 2. LITERATURE REVIEW

The nature of film as an economic good is very specific, it is the so-called experience good - it is characterized in particular by providing the consumer with the benefit of an experience or an impression. At the same time, the consumer is only able to assess the benefit after the actual consumption and it can only be foreseen to a limited extent. This fact is also associated with unfavorable information asymmetry for consumers - all information about the quality of a given film and about the potential benefit it can bring to the viewer is held by the director (or producer) of the film. The filmmakers (especially high-budget filmmakers) also have market surveys,

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test screenings, etc. carried out before the film is released, which further increases their profits. (Basuroy, Desai, Talukdar, 2006) This situation is quite similar to that described by, for example, Akerlof (1970) in the car market - the consumer does not have enough information about the quality of the goods on offer and the situation leads to the displacement of quality goods by poor quality ones. Fortunately, however, there are tools to overcome this unfavorable situation and thus reduce the cost of choosing a car (or film) from the consumer's perspective. The two most important such tools are economic signaling and information provided by market intermediaries.

Film makers are motivated to send economic signals to consumers, as large-scale films in particular often represent hundreds of millions of dollars of investment with relatively high risk and uncertain returns (this environment is therefore risky for both sides). This context is mentioned, for example, by De Vany and Walls (1999) who mention, for example, hiring known actors as a strategy of producers trying to cope with this risk. This not only makes the film more accessible to the viewer, but also signals the high quality of the film, especially when hiring a known (i.e. expensive) actor or actress. High investment signals expectations of return and confidence in high attendance. (Moon, Bergey and Iacobucci, 2010) The *star power* is a commonly used variable in models, but the problem is its quantification, since performing an experiment (comparing the film with and without an actor) is practically impossible. Nevertheless, Levin, Levin and Heath (1997) confirmed, through a behavioral experiment, a significantly higher attractiveness of the film, which includes a well-known actor. Nelson and Glotfelty (2012) conclude that replacing an average actor with a movie star will result in an average profit gain of more than \$16,000,000. Desai and Basuroy (2005) also found that the influence of *star power* is not so significant in familiar genres and that success can therefore be achieved also with film from major genres, but with a worse cast. Since several previous researchers have used various popular actor charts as a proxy for the star power variable (e.g. Sawhney and Eliahsberg (1996)), a similar proxy is also used in this work, see below. A frequently used variable and determinant is the film's budget, which signals the filmmakers' belief in a return on their investment. High-budget filmmakers also often put these resources into the visual form of the film, which is even stronger in genres, such as animation and action films. This determinant was elaborated, for example, by Basuroy, Chatterjee and Ravid (2003) and other authors mentioned below. Film awards are another important signal – these allow the film to stand out among competing films of a given year and at the same time represent a source of information from mediators, i.e. well-known film critics, film academies, etc. Many researchers, such as Terry, Butler, and De'Armond (2011) use the award-winning variable (most often in the form of an Oscar) in their models. Last but not least, whether it is a sequel, prequel, remake or reboot can also be considered as signaling. Consumers are already familiar with the characters, story, motives, etc., so part of the fan base is already secured. According to Basuroy, Desai and Talukdar (2006) or Terry, Butler and De'Armond (2011), these factors, among other things, have a positive effect on attendance in the form of the film's higher budget. Moon, Bergey and Iacobucci (2010) also pointed out that sequels do generate higher attendance (or profits), but also lower viewer and critics ratings.

Information provided by a third party is the second tool for overcoming information asymmetry, especially reviews of given films (in print, on the Internet, etc.) – as mentioned, for example, by Elliot and Simmons (2008). At present, dedicated Internet sites are very important sources of these reviews; in addition to reviews, they bring together film fans and catalog information about movies, their filmmakers and actors. Therefore, these sites provide also additional information for potentially better-quality consumer decision-making in this market. The specific Internet

sites that provide these services and information include the American *Internet Movie Database* or, for example, *Rotten Tomatoes*. *The Czech-Slovak Film Database* is the most famous in the Czech Republic, and it served as the main source of data in this work. Moon, Bergey and Iacobucci (2010) point out the ability of these entities to reduce information asymmetry and get the signals mentioned to consumers. According to Basuroy, Desai and Talukdar (2006), these mediators generally weaken the strength of the signals - the impact of these reviews on filmmakers' profits is thus positive, according to the authors. A very beneficial by-product of reviews (both user and professional) is word-of-mouth; in this context, Basuroy, Chatterjee and Ravid (2003) examined whether users are in the position of predictors or influencers.

Considering the method used and the data used in the calculations below, the study by Terry, Butler and De'Armond (2011) should be mentioned in more detail. Based on the observations of 505 American films from 2001-2003, these authors explained the profit of the given film based on reviews (from the Rotten Tomatoes site), genres, sequel, season, Oscar nomination, budget, and number of cinemas. Using the least-squares method, the authors estimated that a 10% increase in the rating of the film on Rotten Tomatoes increases, *ceteris paribus*, the film revenues by \$7,000,000. Compared to children's films, adult films have a *ceteris paribus* loss of \$12,000,000, sequels and prequels generate \$18,000,000 more profit, and finally an Oscar nomination is, *ceteris paribus*, worth \$6,000,000. A more recent study by Pangarker and Smite (2013) also confirms the important positive role of the budget, film prizes and sequels in determining the film's profit, while attributing less importance to reviews, genre and premieres during the holiday season.

### 3. DATA

The regression model data include a total of 415 films (i.e., 415 observations) that were filmed and screened in the Czech Republic between 2003–2017 and were attended by at least 500 people. The primary source of data was the data of the Union of Film Distributors (UFD) and information obtained from the website of the Czech-Slovak Film Database (CSFD). Since 1992, the UFD has been associating all (17 in total) film distributors operating in the CR, and the CSFD is the largest Czech website, associating over 700,000 film fans. (CSFD, 2018a) In addition to reviews, the CSFD provides information on each filmmaker, the cast, etc., and its importance in the Czech environment is also evidenced by multiple victories in the prestigious Czech poll *Křišťálová lupa/Crystal Magnifier*. (Křišťálová lupa, 2018) This website is, therefore, an ideal example of an information channel that has the potential to both convey signals to consumers and to provide information as a market intermediary. Its role is thus consistent with the above-mentioned authors, such as Moon, Bergey and Iacobucci (2010) or Terry, Butler and De'Armond (2011).

The UFD provided mainly data on the endogenous variable – attendance of films (variable *attendance*) in the number of viewers. The main exogenous variable is the percentage rating of the given film on the CSFD website (variable *rating*), assuming a positive association of ratings and attendance (in line with Moon, Bergey and Iacobucci (2010) or Dellarocas, Neveen and Zhang (2005)). Dummy variables of film genres (*variables action, fairy/tale, documentary, drama, history, horror, comedy, romance and thriller*) served as control variables. The importance of genres is accentuated by, for example, Desai and Basuroy (2005). In addition, dummy variables *sequel* is included as control variable in the model (including all sequels, prequels, remakes, and reboots) in accordance with Basuroy, Desai and Talukdar (2006) or, for example, Terry, Butler

and De'Armond (2011). Other dummy variables (in accordance with Sawhney and Eliahsberg (1996)) include the presence of a popular actor, actress, or director (variables *actor*, *actress*, *director*) taken from the popular CSFD charts. The prerequisite is again a positive association in accordance with the works of Nelson and Glotfelty (2012) or Desai and Basuroy (2005). Also included in the model is the dummy variable *cesky\_lev* representing the prestigious Český lev/Czech Lion film award (according to, for example, Terry, Butler and De'Armond (2011)). (CFTA, 2018). The source of all mentioned dummy variables, except for *cesky\_lev*, was the CSFD website.

The popular Czech director Zdeněk Troška, who is known for making highly viewer successful but poorly rated films is a special case. This director thus represents a phenomenon of filmmakers who maintain a huge fan base (he is the 52nd most popular director on the Czech-Slovak Film Database website (CSFD, 2018b)) despite very negative reviews (the average rating of his films in the period under review is 30.7%). In addition, Troška's films are almost exclusively genre fairy tales and comedies, so if a significant association with attendance proves, the above-mentioned thesis by Desai and Basuroy will apply (2005) on the positive influence of certain genres overcoming even the negative impact of bad ratings. Therefore, the dummy variable *Troska* is included in the model. To abstract the influence of individual years, the model also includes dummy variables of individual years (*year\_2003*, *year\_2004* etc.) and summer months (*july\_august*). The positive association of attendance with summer months can be assumed in connection with the opening of summer cinemas, ongoing summer holidays (higher attendance of children, etc.). This assumption is consistent, for example, with Sochay's (1994) article.

Unfortunately, important variables such as budget and advertising spending cannot be fully traced under the conditions of Czech cinematography and, therefore, could not be included in the model. This is because filmmakers are not obliged to publish this information and it is, therefore, only available for certain films and in an incomplete form.

#### 4. MODEL, EMPIRICAL RESULTS

Using the dataset described above, the following theoretical regression model was estimated using the least squares method:

$$\begin{aligned} \log(\text{attendance}_i) = & \beta_0 + \beta_1 \text{rating}_i + \beta_2 \text{action}_i + \beta_3 \text{fairy\_tale}_i + \beta_4 \text{documentary}_i + \beta_5 \text{drama}_i \\ & + \beta_6 \text{history}_i + \beta_7 \text{horror}_i + \beta_8 \text{comedy}_i + \beta_9 \text{romance}_i + \beta_{10} \text{thriller}_i + \beta_{11} \text{sequel}_i \\ & + \beta_{12} \text{actor}_i + \beta_{13} \text{actress}_i + \beta_{14} \text{director}_i + \beta_{15} \text{troska}_i + \beta_{16} \text{cesky\_lev}_i \\ & + \beta_{17} \text{july\_august}_i + \beta_{18} \text{year\_2003}_i + \beta_{19} \text{year\_2004}_i + \beta_{20} \text{year\_2005}_i \\ & + \beta_{21} \text{year\_2006}_i + \beta_{22} \text{year\_2007}_i + \beta_{23} \text{year\_2008}_i + \beta_{24} \text{year\_2009}_i \\ & + \beta_{25} \text{year\_2010}_i + \beta_{26} \text{year\_2011}_i + \beta_{27} \text{year\_2012}_i + \beta_{28} \text{year\_2013}_i \\ & + \beta_{29} \text{year\_2014}_i + \beta_{30} \text{year\_2015}_i + \beta_{31} \text{year\_2016}_i + u_i \end{aligned}$$

The model was estimated using robust standard errors (HC1 variant within the Gretl software) due to heteroscedasticity (see White's test in Table 1). The semi-logarithmic form was chosen because of a favorable interpretation, to mitigate the effects of marginal observations, and because of a non-normative statistical distribution. The model does not show unacceptable multicollinearity, on the 1% significance level the model is significant (see F-test) and the model explains 52.5% variability of the endogenous variable.

**Table 1:** Regression Model of the Attendance of Czech Films (2003–2017)

Model 1: OLS, using observations 1-415

Dependent variable:  $l\_attendance$ 

Heteroskedasticity-robust standard errors, variant HC1

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	7.79697	0.473737	16.46	<0.0001	***
rating	0.0179494	0.00620445	2.893	0.0040	***
action	0.841727	0.788373	1.068	0.2863	
fairy_tale	0.689909	0.280634	2.458	0.0144	**
documentary	-0.788090	0.310352	-2.539	0.0115	**
drama	-0.443173	0.219384	-2.020	0.0441	**
history	0.594277	0.352030	1.688	0.0922	*
horror	-0.607343	0.589885	-1.030	0.3038	
comedy	0.974460	0.203482	4.789	<0.0001	***
romance	0.514566	0.264744	1.944	0.0527	*
thriller	0.453931	0.330221	1.375	0.1701	
sequel	1.21849	0.199955	6.094	<0.0001	***
actor	0.503446	0.174282	2.889	0.0041	***
actress	0.888992	0.159581	5.571	<0.0001	***
director	0.634945	0.167481	3.791	0.0002	***
troska	1.29369	0.366394	3.531	0.0005	***
cesky_lev	0.348669	0.179143	1.946	0.0523	*
july_august	0.0626857	0.236482	0.2651	0.7911	
year_2003	0.879740	0.402476	2.186	0.0294	**
year_2004	1.11513	0.373100	2.989	0.0030	***
year_2005	0.602906	0.394215	1.529	0.1270	
year_2006	0.718635	0.419119	1.715	0.0872	*
year_2007	1.16753	0.393729	2.965	0.0032	***
year_2008	1.54361	0.339074	4.552	<0.0001	***
year_2009	0.748287	0.319117	2.345	0.0195	**
year_2010	0.889944	0.419595	2.121	0.0346	**
year_2011	0.575520	0.350571	1.642	0.1015	
year_2012	0.344403	0.361450	0.9528	0.3413	
year_2013	0.260630	0.393948	0.6616	0.5086	
year_2014	0.00590467	0.338818	0.01743	0.9861	
year_2015	0.145579	0.388420	0.3748	0.7080	
year_2016	0.299879	0.348256	0.8611	0.3897	

Mean dependent var	10.36750	S.D. dependent var	1.858948
Sum squared resid	679.8600	S.E. of regression	1.332326
R-squared	0.524791	Adjusted R-squared	0.486328
F(31, 383)	25.19991	P-value(F)	7.20e-74

White's test for heteroskedasticity -

Null hypothesis: heteroskedasticity not present

Test statistic: LM = 69.358

with p-value =  $P(\text{Chi-square}(32) > 69.358) = 0.000143014$ **Source:** own processing

The main hypothesis is confirmed – audience rating is positively associated with higher attendance of a given film. The increase in audience ratings by Czech-Slovak Film Database users by one percentage point of the ratings is, *ceteris paribus*, associated with an increase in attendance

by 1.8%. Consequently, the conclusions of the above-mentioned works were confirmed, even in the Czech film environment. User ratings on the Czech-Slovak Film Database website really have great potential as a source of important information for consumer decision-making in the film market, and it is able to reduce his/her film costs for the selection of a given film and thus overcome information asymmetry. However, the issue of endogeneity and the unclear direction of causality should be taken into account, see e.g. Basuroy, Chatterjee and Ravid (2003).

Comedy turned out to be the genre most positively associated with attendance (*ceteris paribus* by 97.4% higher attendance), while documentary film was the most negatively associated (*ceteris paribus* by 78.8% less attendance). Thus, the advantage is for „simpler” genres and relatively traditional genres in the Czech environment (comedy, fairy tale, etc.). The assumption of the study by Desai and Basuroy (2005) was therefore confirmed. Among other favorable factors associated with higher attendance are sequels (*ceteris paribus* associated with 121.8% higher attendance) in accordance with studies by Pangarker and Smite (2013) or Terry, Butler and De’Armond (2011), as well as celebrities – actors, actresses or directors. The best choice here is the casting of a well-known actress, which is, *ceteris paribus*, associated with 88.9% higher attendance. Thus, the general assumptions of Nelson and Glotfelty (2012) and Desai and Basuroy (2005) were confirmed. A positive association was also shown in the case of the Czech Lion Award (in accordance with Terry, Butler and De’Armond, 2011), while the summer months, contrary to Sochay’s work (1994), proved to be insignificant. However, the positive association of attendance and particular years was confirmed, especially the period associated with the financial crisis (approx. 2006-2010).

The determinant of attendance in the form of the work of director Zdeněk Troška has proved to be undoubtedly significant – his films are, *ceteris paribus*, associated with a 129% higher attendance. An important part of this success can certainly be attributed to his popularity and the popularity of his films and motifs. At the same time, however, in his case this may be a very specific form of signaling, as Troška is very consistent in his work – both in terms of themes, cast and motifs, and in the opinions of viewers and expert critics on his work. His films are thus very easily predictable and practically do not undergo any dynamic development in time. As a result, in an environment of information asymmetry and a relatively high consumer cost related to film selection, Troška’s direction creates a very clear and consistent signal that helps consumers very easily create expectations about the film they are about to see. This significantly “cheapens” the consumption of Troška’s films and may consequently make them more affordable for consumers. However, it is very difficult to verify this hypothesis empirically; therefore, so far it is only speculation.

## 5. CONCLUSION

This article, based on the regression model (least squares method), confirmed the importance of the association of audience ratings and the attendance of Czech films. This was done on the basis of a dataset of all original Czech films made and presented between 2003–2017. A one percentage point higher rating on the Czech-Slovak Film Database website is related to, *ceteris paribus*, the 1.8% higher attendance of a given film. Audience ratings thus have the ability to provide the viewer with valuable information, reduce the cost of selecting (or consuming) films, and thus overcome information asymmetry (resulting from the nature of the film as the experience good). The Czech-Slovak Film Database website works as a means of transmitting economic signals (e.g. in the form of information about the film genre, the cast, etc.). In the Czech

cinematography environment, the findings of foreign studies – e.g. Basuroy, Desai and Talukdar (2006) or Moon, Bergey and Iacobucci (2010) – were confirmed, with the difference that these studies examined the impact of reviews by professional critics (unfortunately, such data is not available in the Czech environment).

Other significant positive determinants of the attendance of Czech films proved to be the fairytale, historical film, comedy and romantic film genres, sequels (or prequels, remakes or reboots), the presence of a favorite actor, actress or director, the production of director Zdeněk Troška, the Czech Lion Award, and finally, the screening period in certain years (especially during the financial crisis). The conclusions are again in line with the international studies by Desai and Basuroy (2005), Terry, Butler and De'Armond (2011), Nelson and Glotfelty (2012) and the other works mentioned above. Documentary and drama genres proved to be negative factors, while action film, horror and thriller genres proved to be insignificant (among other things, due to the absence of a tradition of these genres in the Czech film environment), and screening in the summer months. The significant positive factors stated therefore have the potential to fulfill their signaling function in the film market as described in the first part of the article. This article also discusses (though only theoretically) the ability of director Zdeněk Troška to reduce the cost of consumers' film selection through consistent (though in terms of audience ratings, relatively poor quality) production. It is possible to consider that such consistent production in fact raises stable expectations of viewers and thus helps them to overcome information asymmetry through these signals.

Future work and analyses on this topic (not only in the Czech environment) could make the results more accurate through better data, including more variables (especially budget and advertising costs, see Basuroy, Chatterjee and Ravid, 2013), or use time series analysis to exclude endogeneity. (see, e.g., Eliashberg and Shugan, 1997). Researchers (e.g. behavioral economists) could also confirm or refute the mentioned „Zdeněk Troška effect,” or find other similar filmmakers.

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# THE IMPACT OF REGIONAL DIFFERENCES IN HUNGARY FOR COMPANIES WITH THE HIGHEST NET SALES INCOME

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DOI:

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**Abstract:** *Today, the increasing competition has made it increasingly difficult for businesses to survive, operate efficiently and grow. Regional differences also have an impact on the functioning of businesses. The study provides a comparative analysis of companies between a developed and a less developed region of Hungary. The sample under consideration consists of the TOP 1000 companies on the basis of the net sales income, which operating in the two regions. The study will answer questions about the impact of the development gap between regions on the operation of companies with the highest net sales income? Does the development of the area affect the profitability or efficient operation of companies? How big and in what direction of the differences in financial indicators? The investigation is based on a database analysis. The conclusions in the study help to show the impact of regional differences from the perspective of successful businesses.*

**Keywords:** *Financial Diagnostics, Regional Difference, Comparison.*

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## 1. INTRODUCTION

The primary objective of businesses is to achieve successful, profitable operations and to maintain and improve their market positions. There are a number of factors that influence the operation of businesses. These factors include the extent of competition in the market, the number of competitors, various macroeconomic factors and regional conditions. These effects are common, as they also affect larger and leading companies. If companies successfully assess and identify factors influencing their operations, these negative effects may be reduced or eliminated if appropriate measures are taken. That's why it's worthwhile first to take a closer look at what factors affect the operation and growth of companies.

## 2. FACTORS INFLUENCING THE OPERATION OF COMPANIES

The factors influencing companies are covered by a number of literatures. According to Roos and Heidrich (2013), organisms are also influenced by internal and environmental factors. Internal factors include, for example, employees and owners. These factors directly affect the operation of the company. External factors include, for example, the political-legal environment (political stability and predictability), the technological environment (quality of research, technical, technological development) or the economic environment (globalisation).

Szerb (2007) looked at growth opportunities and described that corporate growth is also influenced by a number of factors, which are difficult to examine at company level. Demographic factors and certain behavioural factors, such as the growth strategy or the possibility of using special financial resources, are also having a significant impact on corporate growth (p. 21).

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Papanek (2010) describes the importance of external factors affecting growth in his study on Hungarian small and medium-sized enterprises. Such external factors include the quality of the physical infrastructure of the economy, business conditions, measures to support innovation.

Reszegi and Juhász (2017) distinguish factors which are affecting short-term growth. These factors include the exploitation of fashion waves, the mistakes of competitors. By leveraging them, companies can increase their performance and thus grow in the short term.

Kádárné (2006) divides the factors affecting corporate growth into three groups:

- Factors within the company: knowledge, resources, entrepreneur's abilities;
- Microenvironmental factors: industry situation, market situation, customers and competitors;
- Macroenvironmental factors: political environment, economic environment, infrastructure.

In their study, Janeska-Iliev and Debarliev (2015) identified five different factors that impact business growth:

- Resources and processes that include human resources, efficiency and sources of funding;
- Skills and knowledge, including the qualifications and knowledge of the owner and employees;
- A strategic approach that includes different phases of strategic planning, such as vision and strategic objectives;
- Design, which includes different design techniques related to achieving goals;
- External environment, includes environmental changes.

Factors influencing the growth rate of businesses include environmental/activity specific factors, company structural conditions, manager competence and business strategy (Visintin, Pittino, 2016, p. 5)

Hossain and his co-authors (Hossain et al. 2016) isolated several variables that affect the growth of a business. Examples of such variables are the evolution of net sales, employee, product diversity.

Borschowa (2014) distinguishes eight factors for business growth:

- Operational efficiency,
- Marketing and networking,
- Sales,
- Niche development,
- Value pricing,
- Technology,
- Value added services,
- Practice management.

The literature review shows that both in-company and external factors influence the business operation. For companies it is important to examine these factors. In the study, we examine the impact of external factors, including the impact of the development of the region on the most successful companies.

### 3. METHODOLOGY

The study provides a comparative analysis of companies between a developed and a less developed region of Hungary. The sample under consideration consists of the TOP 1000 companies on the basis of the net sales income, which operating in the two regions. One region is Győr-Moson-Sopron county (western area, more developed), and the other is Szabolcs-Szatmár-Bereg county (eastern area, less developed). We choose these two counties because they are far apart geographically and in terms of development. In 2018, Győr-Moson-Sopron county had a gross domestic product of 121.8 % per capita as a percentage of the national average, which is the 2nd largest in the country. In contrast to this, in Szabolcs-Szatmár-Bereg county it was only 56.5 %, which is the 2nd smallest in the country (KSH, 2018). The TOP 1000 companies are the most successful companies in the two regions on the basis of net sales income achieved. The methodology of the study follows the following logical order: First, the profitability is examined, since profitable operation is the basis for successful operation. It is then examined for financial stability, because a stable financial background is essential for profitable operation. Finally, the examination of the efficiency of the business, since it is not possible to create financial stability without efficient business. Calculations are made in Excel. The financial metrics are calculated for both regions, and then the values obtained are compared.

### 4. RESULTS

Profitability was the first what examined in the study and the first table contains all the calculated results.

**Table 1.** Profitability calculations 2014-2018

<b>Győr-Moson-Sopron county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Operating profit rate</b>	7,19%	6,35%	5,94%	6,07%	7,19%
<b>Net profit rate</b>	6,39%	5,51%	5,26%	5,59%	6,80%
<b>Dividend payment rate</b>	27,82%	33,38%	20,01%	25,95%	19,22%
<b>Profit retention rate</b>	72,18%	66,62%	79,99%	74,05%	80,78%
<b>ROA</b>	7,04%	6,26%	5,67%	6,80%	8,71%
<b>ROE</b>	12,15%	11,86%	10,16%	11,42%	14,14%
<b>ROI</b>	12,48%	11,32%	10,21%	12,75%	16,38%
<b>Szabolcs-Szatmár-Bereg county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Operating profit rate</b>	2,98%	6,47%	4,36%	3,36%	6,92%
<b>Net profit rate</b>	2,45%	5,79%	3,78%	2,98%	6,53%
<b>Dividend payment rate</b>	74,33%	45,56%	25,95%	65,49%	20,38%
<b>Profit retention rate</b>	25,67%	54,44%	74,05%	34,51%	79,62%
<b>ROA</b>	2,66%	5,83%	3,83%	3,33%	7,34%
<b>ROE</b>	4,87%	10,28%	6,55%	5,65%	13,43%
<b>ROI</b>	6,05%	13,06%	8,79%	8,10%	16,84%

**Source:** Own calculations based on the tabulated data set of the Central Statistical Office (www.ksh.hu) in Győr-Moson-Sopron county TOP 1000 and Szabolcs-Szatmár-Bereg county TOP 1000 on individual request

The operating and net profit ratios are one of the most important indicators of the profitability assessment of the companies, since profits are measured against net sales revenue. The data

show that companies in Győr-Moson-Sopron county were able to achieve better values every year except 2015, so the TOP 1000 companies in Győr-Moson-Sopron county have better operating profit and pre-tax profit in relation to net sales revenue. Despite the more efficient operation, it can be seen that the TOP 1000 companies in Győr-Moson-Sopron county pay less dividends compared to the other county. Because of the higher profit retention, they can make greater use of internal growth and they can finance it. Internal growth can improve the profitability of the business and make companies more successful. Return on Assets (ROA), show the ratio of taxed earnings to assets. Return on Equity (ROE) show the ratio of taxed earnings to equity. Return on Investment (ROI) show the ratio of taxed earnings to invested assets. These profitability categories are also more favourable for the TOP 1000 companies in the western area. Overall, the impact of the development of the region is clearly demonstrated in terms of profitability, but by the end of 2018 there had been a significant improvement in the indicators of the less developed region.

As financial stability is essential for profitability, we continue the examination with this. The second table contains all the calculated results.

**Table 2.** Financial investigation 2014-2018

<b>Győr-Moson-Sopron county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Liquidity I.</b>	0,25	0,25	0,33	0,30	0,31
<b>Liquidity II.</b>	0,96	0,82	1,06	1,02	0,95
<b>Liquidity III.</b>	1,44	1,29	1,62	1,60	1,57
<b>Ownership ratio</b>	0,58	0,53	0,57	0,58	0,60
<b>Debt ratio</b>	5,96	5,56	4,23	5,01	6,56
<b>Loan ratio</b>	39,26%	43,20%	40,09%	40,23%	38,30%

<b>Szabolcs-Szatmár-Bereg county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Liquidity I.</b>	0,32	0,37	0,34	0,42	0,34
<b>Liquidity II.</b>	1,14	1,19	1,21	1,24	1,22
<b>Liquidity III.</b>	1,74	1,84	1,87	2,04	2,01
<b>Ownership ratio</b>	0,55	0,57	0,59	0,61	0,56
<b>Debt ratio</b>	6,06	5,73	7,05	9,28	4,74
<b>Loan ratio</b>	40,67%	39,63%	38,11%	34,96%	39,33%

**Source:** Own calculations based on the tabulated data set of the Central Statistical Office (www.ksh.hu) in Győr-Moson-Sopron county TOP 1000 and Szabolcs-Szatmár-Bereg county TOP 1000 on individual request

Liquidity I. compare liquid assets to short-term liabilities. Liquidity II. compare liquid assets and demands to short-term liabilities. Liquidity III. compare current assets to short-term liabilities. Interestingly, the liquidity ratios of companies in the less developed region are higher than those in the more developed region. This is not necessarily considered positive. Higher liquidity makes it easier for firms to respond to sudden costs, but if such costs are not incurred, the company's funds are unnecessarily free. By investing funds, the company can generate additional revenue, so that lower liquidity can also be favourable. Excessively low and too high liquidity are the problem, but none of them are specific to the TOP 1000 companies in the two areas under consideration. The ownership ratio compare equity to total capital. It is important that it should not be too much low, especially below 50%, because it represents a very small proportion of equity relative to total capital. Debt ratio compare equity to long-term liabilities. The higher the value, the better. The

loan ratio compares liabilities to assets. The lower value is favourable. In terms of ownership, debt ratio and loan ratio, the companies in the two regions operate similarly: The equity ratio is above 50 %, the value of long-term liabilities is several times higher than the size of the equity and the ratio of liabilities is around 40 % in relation to all assets. On this basis, it can be concluded that the TOP 1000 companies in the examined sample are capital-strength and not indebted. Basically, the financial indicators do not show the effect of the region's development.

Finally, we are looking at the efficiency of the business, which is important because it is the basis for financial stability. The third table contains all the calculated results.

**Table 3.** Business efficiency 2014-2018

<b>Győr-Moson-Sopron county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Stock time (days)</b>	47	50	51	49	51
<b>Time to settle supplier debts (days)</b>	28	25	26	24	25
<b>Customer receivables recovery time (days)</b>	38	37	36	37	28
<b>IGR</b>	5,35%	4,35%	4,75%	5,30%	7,57%
<b>SGR</b>	9,61%	8,58%	8,85%	9,24%	12,89%

<b>Szabolcs-Szatmár-Bereg county</b>					
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Stock time (days)</b>	64	70	71	75	72
<b>Time to settle supplier debts (days)</b>	35	41	36	38	33
<b>Customer receivables recovery time (days)</b>	45	44	38	35	39
<b>IGR</b>	0,69%	3,28%	2,92%	1,16%	6,21%
<b>SGR</b>	1,27%	5,93%	5,10%	1,99%	11,97%

**Source:** Own calculations based on the tabulated data set of the Central Statistical Office (www.ksh.hu) in Győr-Moson-Sopron county TOP 1000 and Szabolcs-Szatmár-Bereg county TOP 1000 on individual request

Stock time measures the size of inventories for net sales per day. The stock time indicates how many days from purchase to sale. In a less developed region, this value is higher, so the money of businesses stays in stocks for a longer time. Time to settle supplier debts shows the number of days that company can postpone the payments to the suppliers. Customer receivables recovery time shows the number of days between the sale and the actual payments. The time of settle of supplier's debts and the recovery period for customer receivables shall be examined together. Ideally, the buyer finances the supplier and the company does not have to look for extra resources. This correlation is not in any of the regions in the sample under examination and, therefore, other resources are required for efficient business. It is important to note that for the less developed region, almost all indicators have more days. Growth opportunities are part of an efficient business. The internal growth rate (IGR) shows how much the company can grow by using only internal resources. In the case of a sustainable growth rate (SGR), the company may use external resources to grow, but the proportion of own resources and foreign resources should not change. Internal growth rates and sustainable growth rates are lower in less developed areas. The lower internal growth rate is also due to higher dividend payment rates, so dividend policy plays an important role in achieving internal growth. Overall, the efficiency of the business is less favourable in the TOP 1000 businesses of the less developed region.

## 5. CONCLUSION

On the basis of the calculations examined, we have reached the following important conclusions:

- The profitability of the TOP 100 companies in the more developed region is better, with higher revenues and profits. In addition to improved profitability, a better dividend policy is being pursued, allowing for the financing of internal growth;
- From a financial point of view, the liquidity ratios of the less developed area are a little larger, but all of them can be considered favourable. Businesses are capital-strength and are not indebted in either region. From a financial point of view, the impact of the development of the region cannot be demonstrated;
- Business efficiency is less favourable in the case of less developed areas, but businesses in each area should improve their financing time.

Overall, the impact of regional differences can also be demonstrated in the profitability and efficiency of the companies, despite the fact that the most successful companies with the highest net sales income were included in the sample under consideration. It is therefore essential to develop areas, as it can help businesses catch up and improve their effectiveness.

## ACKNOWLEDGMENT

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# EDUCATION FOR STRENGTHENING OF CULTURE OF PEACE AND CULTURE OF COMPLIANCE

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**Abstract:** *Nowadays, the world lives in a constant and deeper reconstruction movement seeking for ensure the friendly relationship among the individuals as the foundation of the democratic societies, in civil and political context, whose fundamental element is the universal education in all level that can get closer the people by dialogue, tolerance, and respect through the responsible and true information in the sense of construct the positive awareness focused on peace and compliance. So, the paper intends to analyze the last resolutions from the General Assembly of United Nations to try contribute with the discuss about the question: is it possible to approach culture of peace and culture of compliance by the education's purposes while contribute to fulfill of the set on the 2030 Agenda?*

**Keywords:** *Awareness in a sustainable development, Education, Culture of peace and compliance.*

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## 1. INTRODUCTION

Information and respect are two words that overtake – or, must overtake – the country border and yours powers (like as the institutional public powers, sovereignty, self-determination, etc.), and should be used as a powerful gun against the intolerance and extremism based on the hate speech, often sustained by the fake opinion, demagogical speech, or xenophobia with no reason; thus as should contribute to approach rich and poor refraining the bad use of economic power, like as savage economic policies or, even bad, criminality based on illicit financial flows.

In fact, the information seeking and respect among the equals are instinctive and innate human feeling that must be revealed, inspired and feed by the good and true information focused into the respect, tolerance and dialogue, that is, the education's values and practices can take the individuals until the there. Thus, analyzing the last UN's speeches about the education, it is possible to understand not only your high importance, but the function as instrument to contribute to the ordered progress of humankind, and sustainable development (by example, A/RES/74/223 linked to A/RES/70/1<sup>2</sup> and A/RES/71/8<sup>3</sup>).

At this point, the education's values and practices in harmony with culture of peace and culture of compliance can be approached to strengthen the awareness to „doing the right things”, and go beyond to facilitate the development sustainable. So, this paper intends to reflect about the question: is it possible to approach culture of peace and culture of compliance by the education's purposes while contribute to fulfill of the set on the 2030 Agenda? (it is important to note that the three dimensions of the sustainable development – economic, social and environmental – will be present).

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<sup>2</sup> A/RES/70/1. Link: <<<https://undocs.org/en/A/RES/70/1>>>, last access 26/06/2020.

<sup>3</sup> A/RES/71/8. Link: <<<https://undocs.org/en/A/RES/71/8>>>, last access 26/06/2020.

The reflection will base in the UN's speeches as approved by the General Assembly of United Nations, mainly the last resolutions about the relationship among culture and education<sup>4</sup> in the scope of the education for sustainable development<sup>5</sup> as provided in the 2030 Agenda<sup>6</sup>, specially the intention to form and disseminate the consciousness for peace and compliance as vital element to set up of the most important systems, to ensure the good practices, to lead a sustainable development: culture of peace, and culture of compliance.

## **2. TALKING ABOUT EDUCATION IN THE FIELD OF SUSTAINABLE DEVELOPMENT**

In 2015 it was published by the General Assembly of United Nations a resolution titled „Transforming our world: the 2030 Agenda for Sustainable Development”, that has been important to ensure the education as one of the priorities of the millennium sustainable development (A/RES/70/1, item 17). Ever since, it is possible to affirm that education is one of the guidelines to set up a wide range of economic, social and environmental objectives in the sense of build peaceful and inclusive societies; but it is not any education, the Resolution refers to the universal access to a quality education at all levels, in all countries, and for all people with no distinction.

One year later, in the politics overview, the A/RES/71/8 („Education for Democracy”) of November 16, 2016, has settled the education has surpassed the condition of a universal right to be made available to all, especially in the context of public policies (UNUDHR<sup>7</sup>, art. 26), to constitute a pillar of democracy understood as „universal value based on the freely expressed will of people to determine their own political, economic, social and cultural systems and their full participation in all aspects of their lives” with the caveat that „while democracies share common features, there is no single model of democracy and that democracy does not belong to any country or region”<sup>8</sup> (A/RES/71/8).

This has led to a series of recommendations, with emphasis on encouraging Member States and national, regional and local educational authorities to engage in public policies to strengthen „education for democracy” by public education, human rights education and education for sustainable development in their educational systems, with a focus on promoting and consolidating values and democratic governance, and human rights, taking into account innovative to facilitate the empowerment of citizens and to promote their participation in political life at all levels (A/RES/71/8, par. 6); responsibility that must be shared by all.

Nowadays, at 74th Session of General Assembly of United Nations this idea has been detailed at least into two ways: a) Culture and sustainable development (A/RES/74/230); and, b) Education for sustainable development (A/RES/74/223). So, education as one of the priorities of the millennium sustainable development and education for democracy can be linked with culture in all of your forms, including culture of peace and culture of compliance.

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<sup>4</sup> A/RES/74/230, article 3. Link: <<<https://undocs.org/en/A/RES/74/230>>>, last access 26/06/2020.

<sup>5</sup> A/RES/74/230, article 3. Link: <<<https://undocs.org/en/A/RES/74/230>>>, last access 26/06/2020.

<sup>6</sup> A/RES/74/223. Link: <<<https://undocs.org/en/A/RES/74/223>>>, last access 26/06/2020.

<sup>7</sup> Universal Declaration of human Rights. Link: <<<https://www.un.org/en/universal-declaration-human-rights/>>>, last access 26/06/2020.

<sup>8</sup> In this case democracy is linked to education, even that the idea of democracy has a universal mean based in local and particular values since A/RES/60/1, item 135.

First, culture and education are two sides of the same coin because are each one enriched by other with values, knowledge, and skills (A/RES/74/230); so, they should walk together, be stimulates and taken to action by all (intergovernmental bodies and organizations of the United Nations system, within their respective mandates and resources, relevant non-governmental organizations and all other relevant stakeholders). To accomplish this mission, it is important „To raise public awareness of the importance of cultural diversity for sustainable development, promoting its positive value through education and media tools” (A/RES/74/230, article 16, a), and (b) „To ensure a more visible and effective integration and mainstreaming of culture into economic, social and environmental development policies and strategies at all levels” (A/RES/74/230, article, 16, b).

Second, education and culture are supplemented by peace to accomplish the sustainable development goals (A/RES/74/230, article 5). This would be possible inside of the culture of peace system (let see ahead), how we can understand from the A/RES/74/230, article 16, „o”: „To mobilize culture as a vehicle to foster tolerance, mutual understanding, peace and reconciliation in the context of conflict-prevention, conflict-resolution and peacebuilding processes”.

Third, when the A/RES/74/230, article 16, „e” refers to entrepreneurship in the same context of inclusive equitable economic growth to acquire the cultural development, it is also possible to analyze the compliance environment, specially the culture of compliance as a strong mechanism to contribute with the strengthening of culture of peace inside the education with culture. Thus, here we have the four elements working together to ensure the sustainable development goals.

Therefore, education is linked to culture, peace and compliance, what in summary admits to consider the education as the higher element to contribute with the formation of a universal and positive awareness to ensure the sustainable development<sup>9</sup>. So, knowledge, respect among equals, instruction for good practices, and orientation of how to proceed are fundamental to build a universal awareness over what will be possible the sustainable development in culture of compliance as one of the mechanisms to guarantee the culture of peace.

### 3. MEANING OF A CULTURE OF PEACE

The Declaration on a Culture of Peace (A/RES/53/243<sup>10</sup>, first part), inspired and made possible by the end of the Cold War, is based on triple recognition: One, that wars are born in the minds of human beings, so that it is there that peace must be strengthened (a premise previously declared in the Constitution of the United Nations Educational, Scientific and Cultural Organization); two, the perception that peace, more than the simple absence of conflict, requires a positive, dynamic and participatory process of promoting dialogue in the process of seeking a negotiated solution in a spirit of understanding and cooperation of all actors; and three, the concrete need to seek the elimination of all forms of discrimination and intolerance.

<sup>9</sup> A/RES/74/223, article 3, is the inspiration when stipulates: “Calls upon the international community to provide inclusive and equitable quality education at all levels – early childhood, primary, secondary, tertiary and distance education, including technical and vocational training – so that all people, irrespective of sex, age, race or ethnicity, and persons with disabilities, migrants, indigenous people, children and youth, especially those in vulnerable situations, may have access to lifelong learning opportunities that help them to acquire the knowledge and skills needed to exploit opportunities to participate fully in society and contribute to sustainable development;”

<sup>10</sup> A/RES/53/243. Link: <<<https://undocs.org/en/A/RES/53/243>>>, last access 26/06/2020.

Furthermore, the Declaration assumes that success in implementing the culture of peace is only possible through the dissemination of values, attitudes, behaviors, and lifestyles dedicated exclusively to fostering peace among people, groups, and nations (Article 2); education, at all levels and aimed at the dissemination of human rights, is the fundamental means for its edification (Article 4), while all must commit themselves to its strengthening, that is, governments have the primary function of promoting it (Article 5), civil society is committed to its full development (Article 6), the major media must contribute to the dissemination of qualified and educational information (Article 7), the United Nations must continue with its mission of performing the critical function leading to the strengthening of the movement (Article 9), and parents, teachers, politicians, journalists, religious bodies and groups, intellectuals, all those who carry out scientific, philosophical, creative and artistic activities, sanitary, humanitarian, directors of governmental and non-governmental organizations, who assist in the key function of promoting the culture of peace (Article 8).

Likewise, the culture of peace, as a set of values, attitudes, traditions, behaviours and lifestyles is based on:

- a) Respect for life, an end to violence, and the promotion of the practice of non-violence through education, dialogue and cooperation (Article 1, a);
- b) Respect for the principles of sovereignty, territorial integrity, the political independence of States, and non-interference in matters of internal jurisdiction of States (Article 1, b);
- c) Unrestricted respect for dissemination of human rights and fundamental freedoms (Article 1, c);
- d) Commitment to peaceful conflict resolution (Article 1, d);
- e) Efforts to satisfy development needs and protect the environment (art. 1, e);
- f) Respect and promote the right to development (art. 1, f);
- g) Respect and promotion of equal rights and opportunities, especially among women and men (Article 1, g);
- h) Respect and promotion of the right of all persons to freedom of expression, opinion and information (Article 1, h); and,
- i) Adherence to the principles of freedom, justice, democracy, tolerance, solidarity, cooperation, pluralism, cultural diversity, dialogue and understanding at all levels of society and among nations (Article 1, i).

In short, among this values, attitudes, traditions, behaviours and lifestyles the right now most important reflection is the conception about the respect for life, an end to violence, and the promotion of the practice of non-violence through education, on the way to acquire the respect and promote the right to development, ever on respect and promotion of equal rights and opportunities, especially among women and men. Once more, it is necessary to build a positive consciousness based on dialogue, tolerance, and respect among the equals that can be learnt under the pillars of education<sup>11</sup> (knowledge, respect among equals, instruction for good practices, and orientation of how to proceed).

#### **4. MEANING OF A CULTURE OF COMPLIANCE**

In the context of the first part of A/RES/53/243 (Declaration on Culture of Peace), when it is proposed that „the fuller development of a culture of peace is integrally linked to” promote „a sustainable economic and social development” (A/RES/53/243, „g”), and work to increase

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<sup>11</sup> This is the standard that marks the A/RES/53, 243, Article 4: “Education at all levels is one of the principal means to build a culture of peace. In this context, human rights education is of particular importance”.

„transparency and accountability in governance” (A/RES/53/243, „k”), it is born a necessary linkage with culture of compliance.

By now, culture of compliance means the commitment to build a consciousness, into a corporative and entrepreneurial world, public and private, with commercial, financial, and assistance activities (or any other with necessary linkage), to compliance practice. Furthermore, compliance practice is used in its most universal concept, which is the commitment to comply with statutory rules qualified by ethics and integrity to do the right thing with priority („doing the right thing”).

From six steps to take a culture of compliance (awareness, communication, education, effective technology, incentives, and incident reporting and case management), education in the context of awareness has special importance as a double instrument: instruction and training:

- a) The instruction indicates the dissemination of the importance of commitment with fulfill standards for good entrepreneurial relations in which compliance facilitates dialogue and respect between individuals, fostering sustainable development. After all, commitment with fulfill standards brings legal certainty and brings individuals closer together.
- b) training aims to ensure that employees, managers, directors, etc., are aware of the organization’s internal policies and the external norms that influence their activity, as well as learn how to act, ethically, integrally and efficiently, within the limits of their function under moderate external guidance and supervision.

## 5. CONCLUSION

This paper has intended to reflect about the question: is it possible to approach culture of peace and culture of compliance by the education’s purposes while contribute to fulfill of the set on the 2030 Agenda? After the convergent analyze, that is the considerations followed up by the last words.

- a) Education is one of the priorities of the millennium sustainable development (A/RES/70/1, item 17), focused in the three dimensions of the sustainable development (economic, social and environmental).
- b) The good and universal education is linked with democracy (A/RES/71/8, and A/RES/60/1, item 135).
- c) Education as one of the priorities of the millennium sustainable development and education for democracy can be linked with culture in all of your forms, including culture of peace and culture of compliance (A/RES/223, and A/RES/74/230). So, culture and education can be considered two sides of the same coin because are each one enriched by other with values, knowledge, and skills (A/RES/74/230).
- d) Education and culture are supplemented by peace to accomplish the sustainable development goals (A/RES/74/230, article 5), what is possible inside of the culture of peace system (A/RES/74/230, article 16, „o”).
- e) The culture of compliance is a strong mechanism to contribute with the strengthening of culture of peace inside the education with culture (A/RES/74/230, article 16). Here, we have the four elements working together (education, culture, peace and compliance).
- f) The four elements working together allow to consider the education as the higher element to contribute with the formation of a universal and positive awareness to ensure the sustainable development based on knowledge, respect among equals, instruction for good practices, and orientation of how to proceed.

- g) This construction of awareness makes possible the sustainable development in culture of compliance as one of the mechanisms to guarantee the culture of peace.
- h) The construction of awareness is also present inside the culture of peace system (A/RES/53/243); insofar it is necessary to build a positive consciousness based on dialogue, tolerance, and respect among the equals that can be learnt under the pillars of education (knowledge, respect among equals, instruction for good practices, and orientation of how to proceed).
- i) Like as education and culture of peace, culture of compliance also has the commitment to construct of awareness through six steps (awareness, communication, education, effective technology, incentives, and incident reporting and case management). The education in the context of awareness has special importance as a double instrument: instruction and training.

So, if this paper should have a last conclusion, the reflection allows affirming that not only it is possible to approach culture of peace and culture of compliance by the education's purposes while contribute to fulfill of the set on the 2030 Agenda, but, a little more, the construction of a positive awareness to sustainable development by education, peace and compliance is the way to get it.

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# FINANCIAL MARKET INTEGRATION OF ASEAN-5 WITH CHINA: AN ECONOPHYSICS APPROACH

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**Abstract:** *The main objective of this research is to estimate whether portfolio diversification is feasible in the financial markets of Indonesia, Malaysia, Philippines, Singapore and Thailand (ASEAN-5), and the market of China, in the context of the stock market crash in China in 2015. The purpose is to answer two questions, namely whether: (i) has the stock market crash in China increased financial integration in the ASEAN-5 financial markets and China? (ii) If the presence of long memories may put in question the diversification of portfolios? The results suggest that these markets are segmented, except for Malaysia/Singapore, bi-directional, and China/Filipinas, pre-crash. However, when analysing the stock market crash period, the results indicate 16 integrated market pairs with structure breakdown (in 30 possible). When compared with the previous sub-period it was found that during the stock market crash the level of financial integration increased significantly (533%). In the post-crash period, there were eight integrated market pairs with broken structure. When compared to the crash period, the level of integration decreased in 50%. In addition, we observed that during the stock market crash these Asian markets did not have long memories, except for the Malaysian market, which reveals some predictability, that is, the increase in integration does not lead to persistence in these Asian markets. In conclusion, the ASEAN-5 markets and China mostly exhibit strong signs of efficiency in their weak form. The authors consider that the implementation of portfolio diversification strategies is beneficial for investors. These conclusions also open space for market regulators to take action to ensure better information between these regional markets and international markets.*

**Keywords:** *ASEAN5; financial integration; long memories; portfolio diversification.*

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## 1. INTRODUCTION

The Efficient Market Hypothesis (HEM) is one of the most important assumptions in financial economics, considering that yields have no memory (correlation), which implies that agents cannot obtain anomalous returns in financial markets through arbitrage-adjusted trading strategies (Ferreira e Dionísio, 2016).

Financial instability is a very important factor for society, since a financial crisis or stock market crash can affect, directly or indirectly, the level of economic well-being of a country's inhabitants. If a given stock market is strongly correlated with the stock market of another country, the financial stability of the first depends in part on the financial stability of the second. For this reason, a strong or close connection between markets increases the levels of vulnerability

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to external shocks and, as a consequence, influences the economic conditions and welfare levels of the respective countries. Thus, the occurrence of integration between markets can have significant implications for international risk diversification (Dias, da Silva e Dionísio, 2019).

This research will assess whether portfolio diversification is feasible in the financial markets of Indonesia, Malaysia, Philippines, Singapore and Thailand (ASEAN-5), and China, in the period of the stock market crash in China in 2015. The results suggest strong levels of integration during the stock market crash, but there is not persistence in the profitability of these regional markets, which would allow for portfolio diversification in these regional markets.

Thus, this research adds two relevant contributions to the literature. The first contribution refers to the study of financial integration and the persistence of profitability in the financial markets of Indonesia, Malaysia, Philippines, Singapore and Thailand (ASEAN-5), and China, in the context of the stock market crash in 2015. The second contribution is of an econometric nature, because of comparing results between econometric methods and mathematical models that have the possibility of evaluating correlations in a non-stationarity context. In particular, the test of Gregory and Hansen (1996), which demonstrates the presence of integration between financial markets, showing structural breaks. In corroboration and despite not directly using the exponent of Hurst, a methodology will be applied that indirectly proposes the same information: Detrended Fluctuation Analysis (DFA). The DFA is a method of analysis that examines the time dependency in non-stationary data series. This technique by assuming that the time series are non-stationary avoids spurious results when the analysis focuses on the relationships of the data series in the long-term period.

In terms of structure, this paper is organised into 5 sections. Section 1 is the current introduction. Section 2 presents a Literature Review of articles on integration in financial markets. Section 3 describes the methodology and data used. Section 4 contains the results. Section 5 presents the main conclusions.

## **2. LITERATURE REVIEW**

The understanding of the links between financial markets in times of financial crisis is relevant for investors, fund managers and academics, in different aspects, namely in the topic of portfolio diversification (Lee, 2017).

Phylaktis and Ravazzolo (2002), Gerlach, Wilson, and Zurbruegg (2006), Chambet and Gibson (2008), Binner et al. (2011) studied financial integration in the Asia Pacific financial markets. Phylaktis and Ravazzolo (2002) found significant regional and global evidence that financial integration goes hand in hand with economic integration, this seems to suggest that economic integration provides a channel for financial integration, which explains, at least in part, the high degree of financial integration found in this study and others for this region, even in the presence of exchange controls. This outcome has important implications for the use of restrictions to isolate these regional markets from international influences. Gerlach, Wilson, and Zurbruegg (2006) demonstrated that Asia-Pacific markets are integrated, despite a structural change that occurred at the time of the 1997 Asian crisis. These results are a particularly important for fund managers concerned about the impact of globalization on their portfolio performance, demonstrating that in the Asia-Pacific region the benefits of diversification are very small. Chambet and Gibson (2008) emphasized that countries with a non-diversified trade structure have more



integrated financial markets. Finally, the results suggest that countries less open to trade are more segmented. Binner et al. (2011) tested the ASEAN countries and Taiwan for consistency in implementing a single currency.

Glick and Hutchison (2013), Auer and Mehrotra (2014), Boubakri and Guillaumin (2015), Pradhan et al. (2016), Wu (2019), Gulzar et al. (2019) examined the interconnections between China's market and Asia's financial markets, and how these links changed during and after the 2008-2009 global financial crisis. Glick and Hutchison (2013) evidenced little synchronization between long-term interest rates, but the financial integration between the stock markets is very significant. This conclusion is consistent with the further development and liberalization of stock markets in relation to the Chinese market, as well as with the increase in trade links in the region. Auer and Mehrotra (2014) argue that the increase in integration has led to greater movement in asset prices. The authors show that true integration through the supply chain is important for the dynamics of asset prices in the Asia-Pacific region. Boubakri and Guillaumin (2015) have demonstrated that East Asian stock markets were partially segmented (except Japan) in the region until 2008. However, the last few years are characterized by an upward trend in the regional integration of these stock markets. Pradhan et al. (2016) used a multivariate structure, showing that all variables are cointegrated and revealing a network of causal connections, including short-term two-way causality between market access and economic growth.

Wu (2019) argues that a large part of this evident high level of integration is demonstrated by common global factors. After filtering out these factors in each stock market, the magnitude of integration decreases substantially. In concluding notes, the results suggest that stock market integration in East and Southeast Asia is not as strong as it appears, while governments in the region are promoting cooperation and financial integration in these regional markets. Gulzar et al. (2019) have analysed Asian financial markets (India, China, Pakistan, Malaysia, Russia and Korea) and the USA. The analysis included daily stock yields from July 1, 2005 to June 30, 2015, with the sample divided into three periods. The authors point out long-term integration between the US market and emerging stock markets, and the level of cointegration increased after the crisis period.

### 3. METHODOLOGY AND DATA

The data used for the test were the prices index (daily) for the markets Indonesia, Malaysia, Thailand, Singapore, Philippines and China. The source of information used was the *Thomson Reuters* platform, with local currency quotes being used to mitigate exchange rate distortions. In addition, in order to answer the research questions formulated and to highlight the impact of the Shanghai stock market crash on the evolution of the different markets, it was decided to divide the sample into three sub-periods, a pre-crash that corresponds to the sub-period from January 5, 2015 to June 11, 2015, a crisis subperiod, which we call the stock market crash, covering the subperiod from 12 June 2015 to 30 January 2016, and a third subperiod, which contains the time period from 1 February 2016 to 31 January 2019, which we call the post-crash subperiod. (Ahmed and Huo, 2018).

The development of research has taken place in several stages. In order to verify the integration or segmentation of the financial market indices analysed, we used the methodology of Gregory e Hansen (1996), because we are considering a very troubled period in the financial markets. Additionally, the reason for standard cointegration tests such as Engle e Granger (1987) e Johansen (1988), are not suitable for testing cointegration with regime change is that such tests assume that

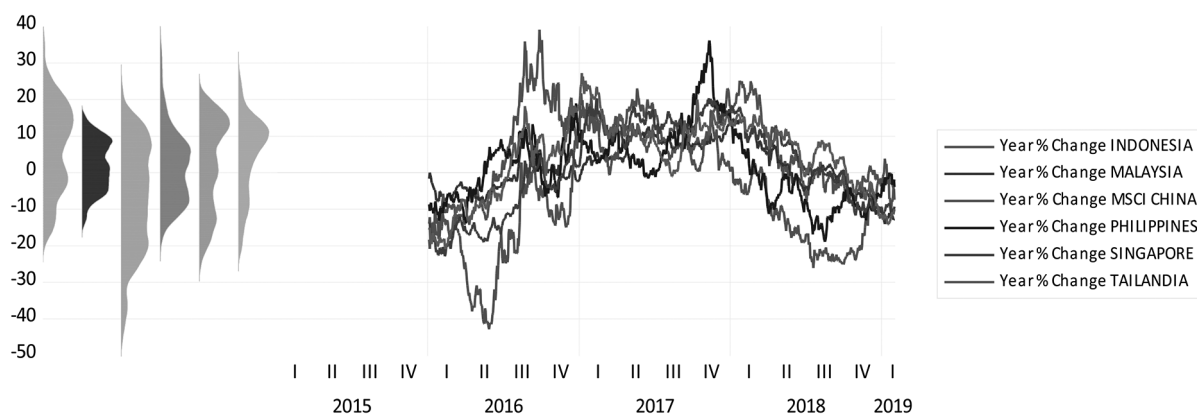
the cointegration vector is invariant in time. Although Hurst's exponent will not be used directly, a methodology will be applied that indirectly proposes the same information: *Detrended Fluctuation Analysis (DFA)*. DFA is a method of analysis that examines time dependency in non-stationary data series. This technique, by assuming that time series are non-stationary avoids spurious results when the analysis focuses on long-term data series relationships. This methodology was developed by Peng et al. (1994) and its origin was in the study of the behaviour of the DNA. Later this method was used to examine the behaviour of financial series. The DFA has the following interpretation: anti-persistent series; series present *random walk*; persistent series.

**Table 1:** The name of countries and their indices used in this paper

Country / Region name	Index
INDONESIA / ASEAN-5	Jakarta Stock Exchange Composite Index
MALAYSIA / ASEAN-5	FTSE Bursa Malaysia Index
PHILIPPINES / ASEAN-5	Philippines Stock Exchange PSEi Index
SINGAPORE / ASEAN-5	Singapore Exchange - SGX
THAILAND / ASEAN-5	Stock Exchange of Thailand
CHINA / ASIA	Shanghai Stock Exchange Composite Index

**Source:** Own elaboration

Figure 1 shows the fluctuations, in first differences, of the ASEAN-5 financial markets, and China. The sample comprises the time frame from January 5, 2015 to January 31, 2019, which is a very complex period due to the stock market crash in China. The financial market indices analysed clearly reveal the instability experienced in these markets in the years 2015-2016. It is also possible to observe an „equilibrium” movement in the year 2017, however, the year 2018 suggests an increase in volatility.



**Figure 1:** Trends (first annual differences) in the 6 financial markets, from 05/01/2015 to 30/01/2019.

**Source:** Own elaboration

Notes: Thomson Reuters: 5 January 2015, 1063 data at the point

The results of the integration test between the ASEAN-5 and China markets in the pre-crash subperiod show that these markets are segmented, except for Malaysia/Singapore, bi-directional, and China/Filipinas. However, when we analyse the stock market crash period, the results show 16 integrated market pairs with structure breakdown (in 30 possible). It is easy to detect that the Indonesian and Chinese markets are the most integrated stock indexes with their pairs, 5 integration (out of 5 possible). The markets of Malaysia, Philippines, and Thailand present 4 and 1 integration, respectively; we find that the structure breaks are synchronized between

August and December 2015, showing the impact of the crash in these regional markets. When compared to the previous sub-period we found that during the stock market crash the level of financial integration increased significantly (533%). In addition, when we examine the post-crash period, we find 8 pairs of integrated markets with a breakdown in structure. Indonesia and China are the indexes that have most integrated with their pairs, 3 integration (in 5 possible). While Thailand and Singapore present a single integration. We found that Malaysia and the Philippines did not integrate with their regional peers, while the breakdown of structure is mostly in 2018. When it is compared to the crash period, the integration level is reduced by 50%. In addition, this evidence is also of interest to policy makers and investors in relation to regional development policies and portfolio diversification strategies in the ASEAN-5 region. These results are in line with the evidence suggested by the authors Pradhan et al. (2016), and Wu (2019).

**Table 2:** Financial integration tests with structural breaks of Gregory e Hansen (1996), for the price indices of the 6 financial markets in the Crash subperiod

Markets	t-statistic	Method	Lags	Break Date	Results
INDONESIA / MALAYSIA	-5.90***	Trend	1	10/09/2015	Cointegration
INDONESIA / PHILIPPINES	-4.96*	Trend	1	12/08/2015	Cointegration
INDONESIA / SINGAPORE	-5.99***	Regime	1	06/10/2015	Cointegration
INDONESIA / THAILAND	-5.20**	Trend	1	12/08/2015	Cointegration
INDONESIA / CHINA	-5.20**	Trend	1	12/08/2015	Cointegration
MALAYSIA / INDONESIA	-5.50***	Trend	1	10/09/2015	Cointegration
MALAYSIA / PHILIPPINES	-5.08**	Regime	5	24/09/2015	Cointegration
MALAYSIA / SINGAPORE	-4.89*	Regime	3	21/09/2015	Cointegration
MALAYSIA / CHINA	-5.13**	Regime	5	07/10/2015	Cointegration
PHILIPPINES / SINGAPORE	-4.74*	Regime	0	08/12/2015	Cointegration
THAILAND / CHINA	-4.88	Trend	5	20/11/2015	Cointegration
CHINA / INDONESIA	-5.92***	Regime	4	18/12/2015	Cointegration
CHINA / MALAYSIA	-6.07***	Regime	4	18/12/2015	Cointegration
CHINA / PHILIPPINES	-4.86	Trend	5	09/10/2015	Cointegration
CHINA / SINGAPORE	-5.95***	Trend	4	15/12/2015	Cointegration
CHINA / THAILAND	-5.14**	Trend	5	13/08/2015	Cointegration

**Source:** Own elaboration

Notes: Data worked on by the authors (software: Stata). The AIC information criterion was chosen. The critical values are found in Gregory and Hansen (1996). The critical values for the ADF and Zt parameters are: -5,45 (1%); -4,99 (5%); -4,72 (10%). For the Za parameter, the critical values are: -57,28 (1%); -47,96 (5%); -43,22 (10%). The asterisks \*\*\*, \*\*, \* indicate statistical significance at 1%, 5% and 10%, respectively.

In table 3 it is possible to verify the results of the DFA exponents, in the three subperiods. to the results, during the pre-crash period, the Indonesian market is persistent (long memories), while the markets of the Philippines, Thailand and China show anti persistence, and the markets of Malaysia and Singapore show an equilibrium trend. In addition, during the stock market crash, these Asian markets do not have long memories, except for the Malaysian market, which shows some predictability, i.e. the increase in integration does not imply persistence in these Asian markets. However, when evaluating the post-crash period, these markets exhibit a very significant anti persistence, except for Malaysia and China. These results are consistent with the evidence from the authors Shirvani e Delcoure (2016), Ngene, Tah e Darrat (2017), Mensi, Tiwari e Yoon (2017), Ali, Shahzad, Raza e Al-Yahyaee (2018), which have demonstrated that markets are efficient in their weak form and that portfolio diversification is a hypothesis to consider.

**Table 3:** DFA results. The hypotheses are :  $\alpha = 0.5$  and :  $\alpha \neq 0.5$ .

Stock market	DFA exponent (before crisis)	DFA exponent (crisis period)	DFA exponent (after crisis)
INDONESIA	0.60 $\cong$ 0,0003	0.47 $\cong$ 0.0011	0.42 $\cong$ 0.0023
MALAYSIA	0.54 $\cong$ 0.0076	0.62 $\cong$ 0.0010	0.50 $\cong$ 0.0014
PHILIPPINES	0.39 $\cong$ 0.0054	0.52 $\cong$ 0.0033	0.47 $\cong$ 0.0039
SINGAPORE	0.55 $\cong$ 0.0025	0.52 $\cong$ 0.0024	0.43 $\cong$ 0.0021
TAILANDIA	0.43 $\cong$ 0.0023	0.45 $\cong$ 0.0035	0.46 $\cong$ 0.0032
CHINA	0.42 $\cong$ 0.0032	0.49 $\cong$ 0.0035	0.49 $\cong$ 0.0040

**Source:** Own elaboration

## 5. CONCLUSION

The general conclusion to be retained and sustained in the results obtained, through the tests carried out with econometric models, was that the level of financial integration increased during the crash but adjusted in the post-crash. In corroboration we observed that these regional markets, in their majority, do not show signs of market efficiency, in their weak form. Therefore, it is reasonable for the ASEAN-5 markets and China to implement efficient portfolio diversification strategies. These conclusions also open space for market regulators to take action to ensure better information between these regional and international markets.

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# THE SHOCKS BETWEEN OIL MARKET TO THE BRIC STOCK MARKETS: A GENERALIZED VAR APPROACH

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DOI:

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**Abstract:** *The pandemic (Covid-19) has affected the global economy, and the impact on financial markets seems inevitable. In view of these events, this essay aims to analyse the shocks between the stock market indices of Brazil (BOVESPA), China (SSEC) India (SENSEX), Russia (IMOEX) and oil (WTC), in the period from January 2, 2019 to May 29, 2020. In order to carry out this analysis, different approaches were undertaken with a view to gauging whether (i) the global pandemic has accentuated the shocks between the BRIC financial markets and the WTC? The daily yields do not have normal distributions, show negative asymmetries, leptokurtic, and exhibit conditional heteroscedasticity. In general, we find evidence that the WTC causes the markets of Russia and India, China does not cause any market, and Brazil is not caused by any market analysed. On the other hand, short-term market shocks are relevant and create some arbitrage opportunities. However, our study did not analyse anomalous returns in these financial markets. These findings also open space for market regulators to take action to ensure better information between international financial markets.*

**Keywords:** *BRIC's markets; moves; arbitrage; portfolio diversification.*

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## 1. INTRODUCTION

The COVID-19 outbreak has caused global concern. On 30 January, the WHO declared it a global health emergency. The easy spread of this virus has caused uncertainty in the global population. This epidemic has also changed people's lifestyles, millions of people have been put in isolation to reduce virus transmission, companies have closed to control the spread of the virus, causing income losses and leading to significant levels of unemployment. Worldwide, flights were cancelled, and transport systems were shut down. In general, economic activities were disrupted and stock markets fell sharply (Saadat, Rawtani, and Hussain, 2020).

Understanding the synchronisation between stock markets, as well as the study of the occurrence of turbulence, is important for investors, investment fund managers, academics, in several aspects, namely when implementing efficient portfolio diversification strategies (Dias, da Silva and Dionísio, 2019).

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This essay aims at analysing the movements among the stock market indices of Brazil (BOVESPA), China (SSEC) India (SENSEX), Russia (IMOEX), and oil (WTC), in the period from January 02, 2019 to May 29, 2020. In order to carry out this analysis, different approaches were undertaken: (i) the global pandemic has accentuated the shocks between the BRIC financial markets and the WTC? The results suggest that the WTC causes the markets of Russia and India, China does not cause any market, and Brazil is not caused by any market analysed. On the other hand, shocks between markets in the short term are relevant and create some arbitrage opportunities.

This research adds contributions to the literature, namely in the analysis of shocks between oil prices and BRIC stock markets, in the context of the global pandemic outbreak. As far as we know there are studies that have analysed the shocks between several financial markets, in the context of the Covid pandemic, namely the authors Liu, Manzoor, Wang, Zhang and Manzoor (2020) and Zeren and Hizarci (2020). However, the approach was quite different from that followed in this trial.

In terms of structure, this test is organised into 5 sections. In addition to the current introduction, Section 2 presents an analysis of the Literature Review with respect to articles on the movements in international financial markets, Section 3 describes the methodology and Section 4 contains the data and results. Section 5 presents the general conclusions of the work.

## **2. LITERATURE REVIEW**

The assessment of the current state of financial integration and shocks between markets is also relevant from a cost versus benefit perspective. The literature commonly agrees that financial integration brings benefits in good times. However, in times of crisis, high financial integration increases the probability of contagion, due to the close interrelationship between financial markets through proximity to markets. Overall, in the long run, the benefits of financial integration are expected to outweigh the costs (Babecký, Komarek and Komárková, 2017).

Raza et al. (2016), You et al. (2017), Mensi et al. (2017), Boubaker and Raza (2017), Bagchi (2017) analysed the synchronizations between the price of oil and the stock markets. Raza et al. (2016) show that oil prices have a negative impact on BRIC's emerging markets. You et al. (2017) show that falling oil prices decrease the profitability of stock markets in pre-crisis periods. Mensi et al. (2017) show the existence of a dependency between oil, and the S&P500, stoxx600, DJI and TSX stock indices. Boubaker and Raza (2017), Bagchi (2017) examined the shocks between oil prices and the BRIC stock exchanges, the authors show significant shocks.

Yao and Kuang (2019), Tiwari et al. (2020), Bhatia et al. (2020) studied the relationships between oil prices and various financial markets. Yao and Kuang (2019) evidence the existence of distinct correlations in various time periods. Tiwari et al. (2020) suggest that the oil market may be a diversification asset for investors in the Japanese and French markets, but investors operating in the remaining G7 markets should be cautious. Bhatia et al. (2020) examined the dynamic relationship between precious metals and G7 stock exchanges and emerging markets (BRIC's). The G7 and BRIC markets exhibit different dynamics with precious metals during the study period (2000-2017).

The dynamics between precious metals and G7 stock exchanges show similar patterns, which represents an aggregation behaviour, however, the same does not apply to BRIC countries. In contrast to the existing literature, this study found that silver offers a better coverage capacity than other precious metals, both in the short and long term. To build an optimal portfolio of two



precious metals assets and the stock index, silver appears as the most favourable option for both the short and long term.

In summary, this work aims to contribute to providing information to investors and regulators in BRIC's financial markets, and to assess whether Oil (WTC) is a diversified market when BRIC's markets break. Therefore, the context of this work is to examine the causalities, and short-term shocks, between these markets, and oil (WTC) in the context of the global outbreak (COVID-19).

### 3. METHODOLOGY

#### 3.1. Data

The prices index data for the financial markets of Brazil, China, India, Russia (BRIC's), and the WTC were obtained from the Thomson Reuters platform. The quotations are daily and comprise the period from January 1st, 2019 to June 29th, 2020 and are in local currency to mitigate exchange rate distortions.

**Table 1:** The name of countries and their indices used in this paper

Country name	Index
Brasil	BOVESPA
China	SSEC
India	SENSEX
Russia	IOMEX
WTC	West Texas Crude

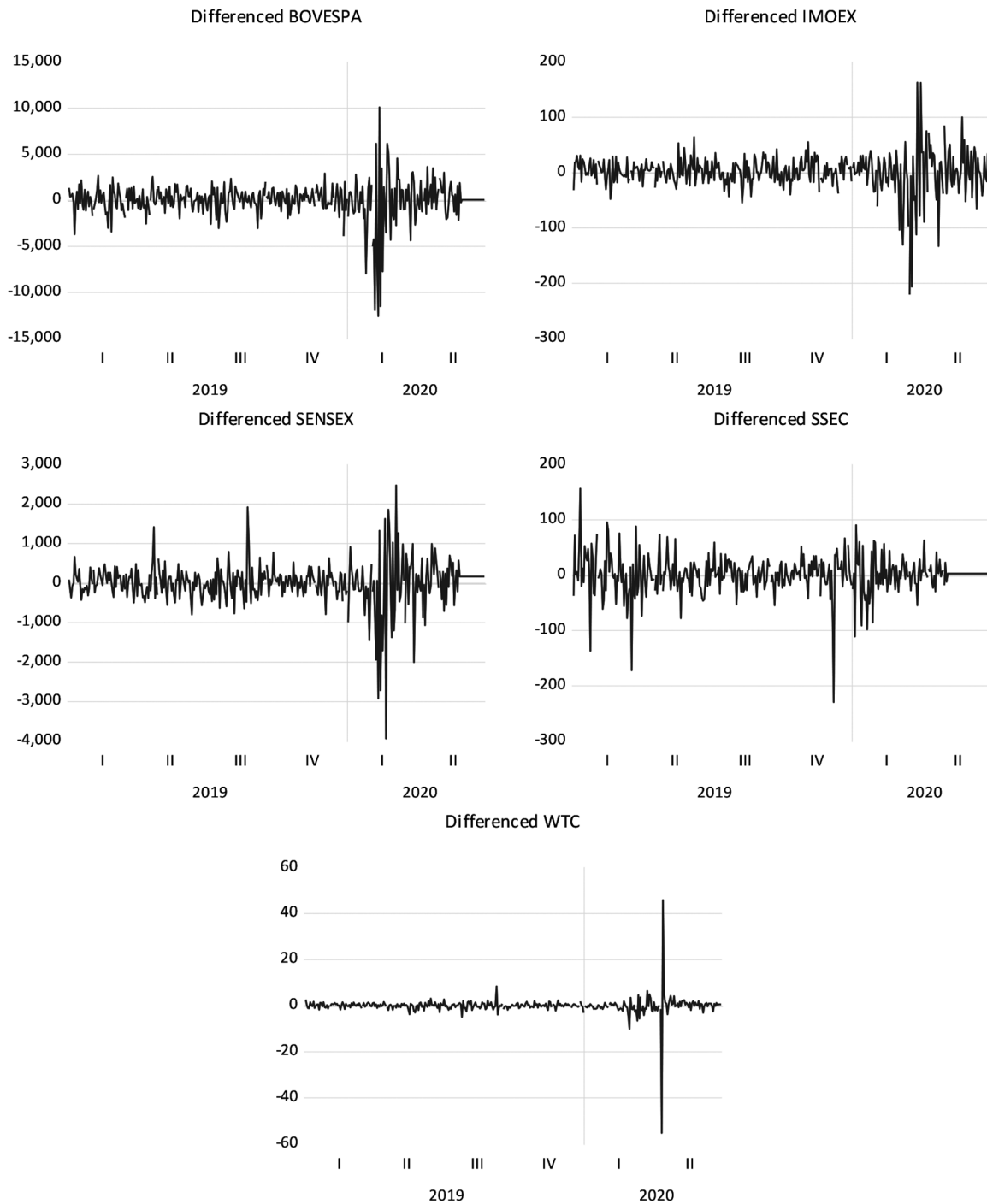
**Source:** Own elaboration

#### 3.2. Methodology

The development of research has taken place in several stages. The characterization of the sample used was carried out through descriptive statistics, the adherence test of Jarque and Bera (1980). To find out if there is a causal effect between the various BRIC markets and oil (WTC), we will use Granger's causality test. This test uses the VAR (Granger Causality or Block Exogeneity Wald Test) procedure, which uses the Wald statistics, to test the null hypothesis that the coefficients of the endogenous variables lagged in the „cause” variable are null or not „cause” in the Grangerian sense the dependent variable. However, it is important to stress that the result of this test presents a high sensitivity to the number of lags considered in the model, so the first concern is to estimate this value properly, in order to arrive at robust evidence (Gujarati, 2004). In a complementary way we will use the methodology impulse response functions (IRF), with Monte Carlo simulations (1000 repetitions), which provide a dynamic analysis (variable with time), designed from the estimates of the VAR model, making it possible to study the calculated causality relations, even when no causality relations to Granger are previously detected between the variables (Lütkepohl and Saikkonen 1997).

### 4. RESULTS

Figure 1 shows the evolution of the BRIC and WTC markets, in first differences. The sample comprises the time span from January 1, 2019 to June 29, 2020, which is a very complex period due to the understanding of the global pandemic outbreak (COVID-19). The yields clearly reveal the instability experienced in these markets in the months of January, February and March 2020, with the exception made to the Chinese market which shows sharper shocks in December 2019.



**Figure 1:** First differences of the 5 financial markets in the full period

**Source:** Own elaboration.

Table 2 shows the main descriptive statistics of the financial markets under analysis, as well as the Jarque-Bera adherence test. The analysis of the descriptive statistics allows us to assess that the yields have positive averages. The market with the most significant standard deviation (risk) is oil (WTC), being the lowest in China (SSEC). The series analysed are leptocurtic and have asymmetric tails. In addition, all the yield series showed signs of deviation from the normality hypothesis.

**Table 2:** Descriptive statistics, in yields, of the 5 financial markets in the full period

	BOVESPA	IMOEX	SENSEX	SSEC	WTC
Mean	4.52E-05	0.000388	0.000311	0.000319	0.001460
Std. Dev.	0.023602	0.013447	0.017064	0.011816	0.058052
Skewness	-1.688931	-1.068808	-1.746468	-1.065231	1.162113
Kurtosis	18.85963	16.43405	21.09384	11.62893	21.28141
Jarque-Bera	4075.536***	2868.167***	5263.611***	1224.460***	5263.986***
Sum	0.016813	0.144218	0.115642	0.118811	0.542981
Sum Sq. Dev.	0.206675	0.067089	0.108033	0.051795	1.250280
Observations	372	372	372	372	372

**Note:** \*\*\*, \*\* represent significance at 1% and 5%, respectively.

**Source:** Own elaboration.

To analyse the significance of causality relationships between BRIC's financial markets and the WTC, the VAR Granger Causality/Block Exogeneity Wald Tests model was applied. To determine the number of lags to include in the causality tests, we used the LR, FPE, and AIC criteria, which suggest 9 lags. Fewer lags increase the degrees of freedom, more lags decrease autocorrelation problems. As we previously performed a VAR with 9 lags, and then performed the VAR Residual Serial Correlation LM Tests with 10 lags, the null hypothesis was not rejected, which corroborates that the model presents a robust estimation (see table 3).

**Table 3:** VAR Residual Serial Correlation LM Tests

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
10	32.65329	25	0.1400	1.311731	(25, 1112.2)	0.1400

**Note:** \*Edgeworth expansion corrected likelihood ratio statistic.

**Source:** Own elaboration.

The results of Granger's causality tests are shown in Table 4, concerning BRIC's financial markets and the WTC. Granger's causality tests show 8 causal relationships (out of 20 possible). The WTC causes, in the Grangerian sense, Russia and India, while Brazil causes Russia and India, and Russia causes India and China. India causes Russia and the WTC, while the Chinese market causes no market and Brazil is not caused by any market. The Indian and Russian markets are the most caused markets in the sample. These results are in line with the results presented by the authors, Raza et al. (2016), You et al. (2017), Mensi et al. (2017), Boubaker and Raza (2017), Bagchi (2017) which show that oil prices cause shocks in the stock markets.

**Table 4:** Granger Causality Tests / Block Exogeneity Wald Tests, Full Period

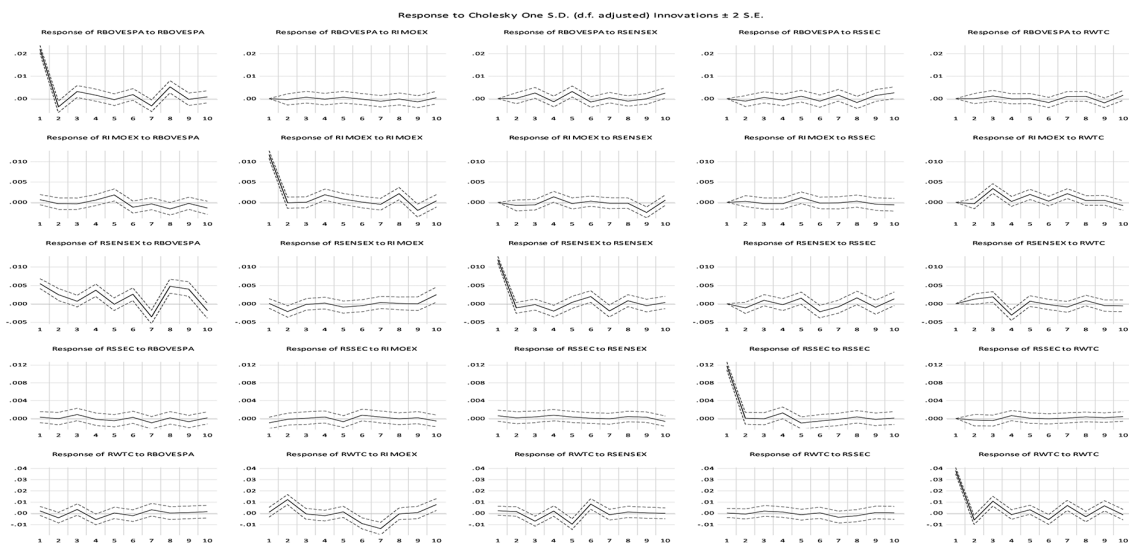
	BOVESPA	IMOEX	SENSEX	SSEC	WTC
BOVESPA	*****	0.33(9)	1.43(9)	1.46(9)	1.55(9)
IMOEX	<b>1.71(9)*</b>	*****	<b>2.11(9)**</b>	0.52(9)	<b>7.29(9)***</b>
SENSEX	<b>12.19(9)***</b>	<b>3.79(9)***</b>	*****	1.17(9)	<b>4.50(9)***</b>
SSEC	0.70(9)	<b>11.59(9)***</b>	0.53(9)	*****	0.42(9)
WTC	1.19(9)	48.97(10)***	<b>3.55(10)***</b>	0.42(9)	*****

**Note:** The lateral values in parentheses refer to lags. \*\*\*, \*\*, \* represent significance at 1%, 5% and 10%, respectively.

**Source:** Own elaboration.

The IRF methodology, with Monte Carlo simulations (see figure 2), tested the degree of response of the variables among the stock market indices of Brazil (BOVESPA), China (SSEC) India (SEN-

SEX), Russia (IMOEX) and oil (WTC), to changes (impulses) of a standard deviation of each of the variables mentioned. These results show the prompt response to market shocks, reflected on the following day, but also the speed of market information processing. In all cases, innovations of their own and other pairs generate statistically significant positive/negative responses on the following day, at the 5% significance level. Given the one-day maturity, the response of each market to shocks in its own market exceeds the size of the response to shocks in other markets, in virtually all markets. Few situations have failed to do so. We can therefore infer that the assumption of market efficiency is questionable, since the forecast of market movement can be improved by considering the lagged movements of the other markets, allowing for arbitrage operations. These results are validated by the authors Morales and Andreosso-O'Callaghan (2020), Şenol and Zeren (2020), Mzoughi et al. (2020) which show significant shocks from the global pandemic (COVID-19).



**Figure 2:** WTC and BRIC financial markets, with Monte Carlo Simulations, in the Full Period

Source: Own elaboration.

## 5. CONCLUSION

The overall conclusion to be retained and sustained in the results obtained, through tests performed with econometric models, demonstrates that at the end of the sample the global pandemic has a significant impact on the adjustment of the financial markets analysed. The results indicate that the WTC and the BRIC stock markets have significant causalities, which may call into question efficient portfolio diversification strategies. On the other hand, short-term market shocks are relevant and create some arbitrage opportunities. These findings also open space for market regulators to take action to ensure better information between international financial markets.

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# ISSUES OF E-COLLABORATION AND TELECOMMUTING

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**Abstract:** *This paper examines the benefits and issues in using information technologies, to support collaboration of teams in a virtual environment, the emerging methods and technologies and socio-technical issues associated with collaboration and teams in virtual environments. With the globalization of the economy, more and more employees are working with team members half way around the world. In order to reduce the negative effects, developers and users of e-collaboration tools for virtual environments should address human interaction issues, as well as social issues and organizational issues.*

**Keywords:** *e-collaboration, telecommuting, virtual environment, virtual teams, human-computer interaction.*

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## 1. INTRODUCTION

Due to the technological and paradigmatic developments in the area of human-computer interaction [1], the fields of smart environments, multi-modal interaction, ambient intelligence and ubiquitous computing nowadays are converging into “human computing” [2]. Human computing escalates the complexities of human-human and human-machine interaction in the already complex software engineering and system integration [3]. Emerging e-collaboration systems [4] are expected to be increasingly adapted to the nature of human cognition and communication and present a quantum leap beyond modern productivity-oriented workplace technologies in which performance is the key objective and the user experience comes after business process logic and formalized workflow.

To understand the current limitations, i.e. opportunities for improvement in e-collaboration tools and concepts and possible issues, we first need to define e-collaboration itself. Kock [5] stated that e-collaboration consists of the following elements:

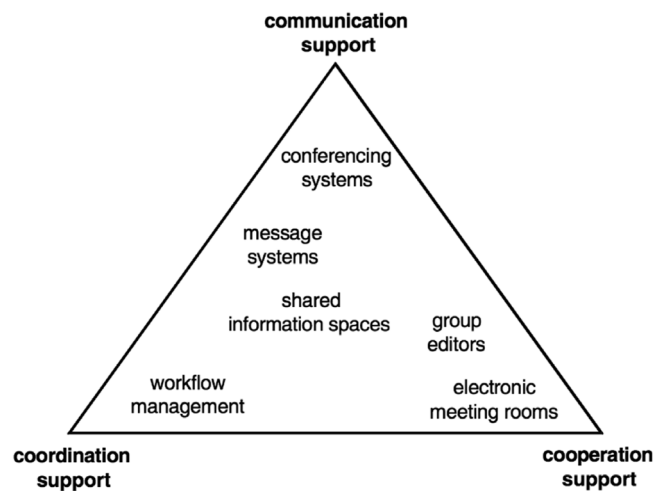
- The collaborative task: A task that parties can work on together. For example, jobs beyond the capacity of one organization, or jobs that require complementary skill sets;
- The e-collaboration technology: Existing or new IT infrastructure such as teleconferencing, discussion boards and instant messaging;
- The participants: Organizations that are collaborating, industry associations and government agencies. Characteristics of the participants and size of the group can also have an effect on the collaboration;
- Mental schemas of the participants: The knowledge and experience of the participants and the degree of similarity between participants. For example, expert or novice understanding of the task;
- The physical environment: The location of the participants. For example, the geographical location of the toolmakers was dispersed and therefore they needed to apply more effort to e-collaboration, whereas the IT organizations were within the same geographical area;
- The social environment: the perceptions of trust and the behavior among the participants, as well as peer pressure among participants.

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Main goal of e-collaboration systems is to reduce the isolation of users from each other [4]. E-collaboration systems explicitly provide awareness of the users and their activities. Lynch et al. pointed out in 1990 that e-collaboration systems are distinguished from normal software by making the user aware that they are part of a group, while most other software seeks to hide and protect users from each other [6].

The social science classification of e-collaboration tools according to the main mode of interaction as proposed by [7] is presented in Figure 1. While the presented classification seems old, it is still very accurate, as it refers to the basic modes of interaction, the so-called 3C's of *communication, coordination and cooperation*, which bring forth the fourth C: *collaboration*, which can be defined as *shared creation* [8]. What has changed of course is the technology. Technical characteristics of the e-collaboration platforms, and the scope of integration of technologies today allow the user to be more productive, and support several modes of interaction within a single platform or within a solution that seamlessly integrates several platforms such as Slack [9]. A more detailed and recent classification of modes of interaction in e-collaboration systems can be seen in [10] or [11].



**Figure 1:** Classification of e-collaboration systems by the main mode of interaction supported [7]

## 2. E-COLLABORATION DEVELOPMENT TRENDS

Availability of solutions for e-collaboration support and their popularity has increased due to higher acceptance of telework and progress of technology, i.e. accessibility of fast internet and capabilities of mobile devices, while the recent Covid-19 crisis has given an unprecedented boost to the number of persons working from home. E-collaboration systems and tools can be categorized according to several parameters. The fundamental parameters of collaboration are the time and location or space of participating users. While the space or location can be considered as a discrete dimension, the participant's presentation in the software (we can refer that to as the dimension of artificiality) can be implemented in various combinations of synthetic and realistic representations. In this paper, we present a combination of the venerable Benfords et al. [12] model of shared spaces, which is focused on synchronous communication, along with various categorized kinds of groupware solutions. The resulting categorization of groupware solutions is shown in Table 1. Multi-purpose collaboration tools are listed in several categories, as they can be used under synchronous and asynchronous collaboration conditions, and they offer



different representation type choices. We can also observe that that some modes of collaboration are more popular, i.e. supported by a higher number of tools. For example, there are few tools intended specifically for asynchronous collaboration at the same location, as location is generally not relevant when users participate at different time slots (asynchronous collaboration).

**Table 1:** Proposed categorization of e-collaboration systems according to time, space and artificiality

<b>DIMENSION OF ARTIFICIALITY</b>	<b>Synthetic (generated)</b>	<b>AUGMENTED REALITY</b>		<b>VIRTUAL REALITY</b>	
		Same time (synchronous)		Same time (synchronous) <i>e.g. virtual worlds, chat</i>	
		Different time (asynchronous)		Different time (asynchronous) <i>e.g. virtual worlds, virtual spaces</i>	
		<b>PHYSICAL REALITY</b>		<b>TELE-PRESENCE</b>	
	<b>Physical (realistic)</b>	Same time (synchronous) <i>e.g. e-meetings, e-voting, e-brainstorming</i>		Same time (synchronous) <i>e.g. teleconferencing, e-meetings, screen sharing, shared documents, chat</i>	
		Different time (asynchronous) <i>e.g. collaborative design, augmented reality training, workflow assistance</i>		Different time (asynchronous) <i>e.g. workflow tools, document management systems, email, shared documents, forums</i>	
		<b>Local (physically present)</b>		<b>Remote (represented)</b>	
		<b>DIMENSION OF SPACE</b>			

**Source:** authors)

Along with the thousands of person-years, and millions of dollars, invested in the development of formal e-collaboration solutions (usually proprietary and created by professionals), a new type of community-driven e-collaboration has emerged, created in part by the open-source-software movement: web-based collaboration and content-creation tools and technologies, developed by volunteers, and freely available (under the conditions of an open-source license). On platforms like Wikipedia, content is authored and moderated by users and accessed freely through Web 2.0 based platforms [13], [14].

Web 2.0 applications are often associated with “social software”. Whereas traditional software focuses on productivity and process support, web 2.0 applications focus on enabling communication, cooperation, and collaboration of individuals and groups over the internet, and can be therefore referred to as “social software”. Generally speaking, collaboration software is based on different services for setting up networks and supporting the distribution of information within the network (e.g. e-mail, instant messaging, chats, or blogs) [15], however with the evolution of web technologies the range of services offered in collaboration is increasing, and new interaction concepts that appear on the web are experimented with in collaboration software as well, e.g. gamification of work [16] and leveraging social networks [17], [18] to improve e.g. social aspect of knowledge management [19].

While the concepts of gamification and social networking are in themselves not problematic, the adoption and integration of open social e-collaboration systems into a business information system can become a compliance and control nightmare, and lead to information leaks or result in public relations disasters. Additionally, platforms outside of company control may be retired without warning, leading to loss of data and (again) public relations problems. Companies should therefore introduce new collaboration platforms only if they offer an acceptable level of security and control, and avoid integrating public solutions. This does not exclude the use of commercial service platforms such as Slack or Zoom. However if the CEOs in the early 2000s

were taken by surprise by the popularity of web forums and social networks, and wondered whether to ban them at the firewall level or not, companies today should develop strategies to build employee engagement with their enterprise social networking platforms [20].

### **3. HUMAN-HUMAN INTERACTION ISSUES**

Even if the development of technologies and concepts in e-collaboration tools has been impressive, there are still aspects of human collaboration and interaction that are yet not sufficiently supported. While “ICT allows organizations to bridge time and distance barriers with once undreamed of ease” [21], it also creates new boundaries at the level of the work unit [22], [23], [24].

Video conferences do not provide sufficient nonverbal clues, such as body language or facial expressions, e.g. gaze direction, and due to the limited angle and 2D nature of video and low audio quality offer limited information on spatial presence of participants. Videoconferencing does not generate a sensation of co-location: participants perceive only a wall of faces, and don't experience being in the same place with others; they can see whether others are looking at the camera or not, but don't know what else they may be looking at. This shortcoming of videoconferencing systems is present in today's widespread videoconferencing tools as it has been in 1997 [12], [25], [23]. Majority of the nonverbal cues that we have taken for granted at in face-to-face meetings are not present in video, e.g. body posture, hand gesture, spatial orientation, glancing, and facial expressions. And in large online meetings, passive participants may not even appear on video, giving the perception of them “lurking” in the background, like in text-based environments [26]. At this point we should mention, that face-to-face meetings in the time of Covid-19 epidemic offer limited non-verbal clues as well, due to the masks obstructing a large part of participants' faces.

A lack of nonverbal cues and is especially problematic in intercultural communication, a relevant issue in virtual enterprises and globalized economy [27], [28], [23], [29]. While companies can provide training in intercultural communication and nuances in verbal communication, detection of those via a limited communication channel such as videoconferencing is difficult. Research shows that certain types of media are more useful for certain types of knowledge sharing depending on the cultural and linguistic variation between the communicating parties [30].

### **4. ISSUES IN SOCIO-TECHNICAL SYSTEMS**

A technology is successful only if it is adopted by the users, and that depends on the correspondence between technology and the user's requirements, their preferred workflow, and their organizational culture. Therefore, e-collaboration systems can bring added value only if they suitably support (and improve) the existing socio-technical systems. Put plainly, users need to have good reasons to use a work-related e-collaboration tool or platform. A tool will be perceived as useful only if the users can accomplish more, or more easily by using it. Therefore, the collaborative tools offered within the environment should offer an improvement to the current workflow. However, humans are not robots, but social creatures, and therefore any social e-collaboration tools should support social activity and engagement, a feature that hasn't been appropriately recognized in previous CVE research [31], [32], [33]. This may mean allowing for chance meetings (equivalent to bumping into a person on the corridor). Impromptu, informal meetings with colleagues can strengthen social ties and allow informal passing of information, which can be crucial to knowledge workers, as knowledge also has a social component. Infor-

mal meetings build a sense of belonging to a team and are essential in the construction of an organizational culture. However, informal meetings can take place only if the participants are present at the same time - a synchronous rather than asynchronous presence.

As the term socio-technical suggests, the technological system and the social system are inter-related and need to be developed in tandem for the whole socio-technical system to be successful. If a technical system (e.g. a new e-collaboration platform) is introduced at the expense of a well-accepted social system, the results will be counterproductive. To cite Koch [34], the main take-aways from the socio-technical systems for e-collaboration discussion are:

- technical systems (e-collaboration support technology) are highly embedded in social systems,
- the social and the technical subsystems should be optimized (designed) in parallel, because they influence each other,
- the goal/task of the overall system should not be forgotten as it represents a source for coherence of the system.

## 6. CONCLUSION

A successful implementation a new e-collaboration system necessarily involves the social aspect, as company culture may need to adapt to new workflow and collaboration modes introduced by the e-collaboration system. User involvement from an early phase of development (needs analysis) can bring us closer to an optimal e-collaboration system design. Participatory design principles should therefore be followed to inform the socio-technical system development not only from technological but also organizational and social aspects. For example, in an implementation of an intranet social network system, the team leader should involve all team members from the beginning. Ideally, one would start with a discussion to identify the business processes to be supported with the social network.

To enable a safe and effective use of an open e-collaboration system, a company should first ensure the information security of the new system, including the points of integration with existing systems, the control of any data the employees may enter or create in the new system, and then help their employees explore the possibilities, without unnecessary restrictions, avoiding errors others have made before. Key to success is to strike the right balance between providing the right guidelines and leaving enough freedom for users to develop their own ways of using the e-collaboration tools, and monitor the evolving process in order to identify problems and good practices. Insufficient guidance might lead to an ineffective diversity, but too much guidance might kill the important “fun factor”. Consequently, the guidelines should be developed in a participative approach in close cooperation with the end users.

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# LIFESTYLE AND WAYS OF LIVING OF SENIOR HOUSEHOLDS

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DOI:

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**Abstract:** *Growing the proportion of older people requires adapting services and products to their needs and preferences, which will support and extend their full life. While once people aged 55 and over considered themselves old, most of them now live an active life. Over the past decade, the proportion of those who are fully employed has changed and their stereotypes and behaviour have increased, thus changing the quality of life demands. With the gradual aging of the population, the problem of dealing with the housing of older people begins to grow. Housing is one of the key factors in the fight against social exclusion. Housing promotes coherence between communities, enabling sustainable development goals to be achieved. Each state uses its own housing policy, based on social policy and historical conditions, to solve housing-related problems. In the paper we will discuss the possibilities of life in retirement age.*

**Keywords:** *Housing Policy, Rental Housing, Seniors, Shared housing, Quality of life.*

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## 1. INTRODUCTION

The lifestyle of seniors has changed significantly in recent years. Employed seniors and pensioners are moving away from urban apartments, to smaller family homes outside the cities they plan to renovate. Seniors' activity in the area of housing is proven by surveys according to which people aged 55 and over are currently using more frequent loans for housing, for renovation or household equipment than for the same age group ten years ago. While in Slovakia only 3.5% of older people over 55 used some type of housing improvement loan in 2008, today this same age group is indebted in up to 14.8% of cases. For those who are not willing to finance the improvement of housing from foreign sources, one option is independent housing. Independent living is a concept that, by its very nature, fully covers the needs of seniors, while providing them with opportunities for meaningful and active use of retirement time. Under one roof, it provides the elderly with the available health and assistance services that most people need at this age, and on the other hand, this concept also brings a social and social dimension to the life of the elderly, which is still forgotten today. For example, through organized social activities where clients meet their peers. Moreover, such facilities provide permanent medical care for various degrees of medical dependence. An important and strength of independent living for seniors is the ability to avoid the loneliness that pensioners often suffer from. Research suggests that loneliness can be as harmful to people as smoking or obesity. Shared housing is a special form of housing, the most common form of which is renting a bed in a multi-room apartment or house. The tenant, however, lives in an apartment with several people, which may not be a sought-after form of housing for everyone. In the paper we will discuss the possibilities of living in retirement age. One of the possibilities how to use own housing at the time of retirement is the possibility of financing one of the mentioned forms of housing.

The period we live is referred to as a gray continent, which is related to the trend of increasing life expectancy as well as the number of people of retirement age. Population aging is a continuous process that does not manifest in all individuals at the same rate, but is influenced by a number of

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external factors, but also by genetic characteristics and a way of life. Thanks to these factors, people's lifestyle and possibilities of improving their living time are also changing. Housing is also an important issue. (Oswald, 2007, Holková, 2019). Housing as a basic need to meet needs becomes an important factor in retirement life at retirement age. Seniors either try to live alone, if they are self-sufficient, otherwise they rely on the use of day-care facilities or institutional care facilities.

## 2. QUALITY OF LIFE, THEORETICAL BACKGROUND

Quality of life is, according to the Strieženec (1996), a summary of both objectively and subjectively assessable aspects of human activities and perceptions in everyday life, in real social space with concrete rules of mutual coexistence, with real questions of the goal, meaning and purpose of earthly life. The World Health Organization assesses the quality of life by indicators, physical health, mental function, level of independence, social relations, environment and spirituality. The issue of quality of life was also addressed at the 2011 OECD conference in Paris, where they defined the quality of life in eight areas, material well-being, health, education, personality, political opinion, social relations, environmental conditions, personality and economic security. Eurostat defines quality of life as a structure of nine dimensions, material living standards (income, consumption, property), health, education, personality activities (paid work, unpaid domestic work, work attendance, leisure, housing), political opinion and governmental power, social contacts, environmental conditions, personality uncertainty, economic uncertainty.

**Table 1.** Examples of Items in the Quality of Life Profile: Seniors Version

<b>Being</b>
<p><b>Physical Being</b></p> <ul style="list-style-type: none"> <li>• being physically able to get around my home and neighbourhood</li> <li>• good nutrition and eating the right foods</li> </ul> <p><b>Psychological Being</b></p> <ul style="list-style-type: none"> <li>• being able to have clear thoughts</li> <li>• coping with what life brings</li> </ul> <p><b>Spiritual Being</b></p> <ul style="list-style-type: none"> <li>• feeling that my life is accomplishing something</li> <li>• participating in religious or spiritual activities</li> </ul>
<b>Belonging</b>
<p><b>Physical Belonging</b></p> <ul style="list-style-type: none"> <li>• Having a space for privacy</li> <li>• Living in a place especially equipped for seniors</li> </ul> <p><b>Social Belonging</b></p> <ul style="list-style-type: none"> <li>• being able to count on family members for help</li> <li>• having neighbours, I can turn to</li> </ul> <p><b>Community Belonging</b></p> <ul style="list-style-type: none"> <li>• being able to get dental services</li> <li>• going to places in my neighbourhood (stores, etc.)</li> </ul>
<b>Becoming</b>
<p><b>Practical Becoming</b></p> <ul style="list-style-type: none"> <li>• the caring I do for a spouse or other adult</li> <li>• doing work around my home (cleaning, cooking, etc.)</li> </ul> <p><b>Leisure Becoming</b></p> <ul style="list-style-type: none"> <li>• having hobbies (gardening, knitting, painting, etc.)</li> <li>• participating in organized recreation activities</li> </ul> <p><b>Growth Becoming</b></p> <ul style="list-style-type: none"> <li>• improving or keeping up my thinking and memory skills</li> <li>• adjusting to changes in my personal life</li> </ul>

**Source:** <http://sites.utoronto.ca/qol/projects/seniors.htm>



The Center for Health Support at the University of Toronto, Canada has developed a multidimensional model, based on a holistic concept of quality of life, comprising three core domains and nine partial domains. (Table 1) The real quality of life for a particular individual is determined by the personal importance of each domain and the extent to which it is being met in real life. Emphasis is placed on the opportunities, opportunities and limitations that each person has in their lives, and these reflect the interaction between them and the environment. Table 1 gives examples of items in the quality of life profile: Senior version.

The quality of life is thus the result of the interaction of social, health, economic and environmental conditions related to social development and human well-being criteria. The assessment of quality of life according to the given criteria also depends on age. In the paper we will deal with the quality of life of seniors, which is evaluated according to different abilities and factors that are comparable with the hierarchy of human needs. These include autonomy, self-sufficiency, decision-making ability, absence of pain and suffering, retention of sensory abilities, a certain financial standard, a sense of usefulness for others, some degree of happiness and morality. An important factor that affects the quality of life is a disease that changes both objective and subjective quality. What affects the quality of life of seniors is also their social situation, family relationships. Family life is of great importance to the elderly and usually expects some help from the family. It enables to create emotional and social background for aging and old age.

## **2.1. Quality of life of seniors**

Many old people complain of loneliness. There is no direct link between the severity of loneliness and the way of living. People living in institutions often feel the greatest loneliness. Old people prefer living in their home rather than living in a comfortable facility for the elderly. Society is able to look after an old person, can provide him with accommodation, food, health care and he can try to fulfil and organize his free time. However, it is not able to replace the fulfilment of its need for emotional relationships and the need to be tied to someone. It is very painful for the elderly to observe a mismatch between their inner experience and how others are looking at them. Bad interpersonal relationships are a source for the old person conflict, deprivation and mental suffering.

### ***Analysis of the level of care and housing of seniors in the selected municipality***

The older a person is, the firmer their stereotypes are fixed and the harder and slower they adapt to new and complicated life situations. The elderly adheres to the way of life and opinions, because it is very difficult to adapt by its biological nature. Adaptability is a feature of youth. Older people are reluctant to accept habits that are contrary to his past. Years of habits provide him with a comfortable way of life, how he can cope successfully with everyday situations. An unexpected or strong stimulus can upset the inner balance. (Sika, 2019, Oswald, 2007, Holková, 2019). This is also related to the change in housing. Ideally, a senior can stay in his natural environment. However, some seniors are not able to live alone. In this case, care for the elderly takes place in institutionalized facilities where a higher quality of life with a professional approach should be guaranteed. (Tobišová, Jarošová, 2009). Seniors use social services homes, specialized facilities, nursing facilities and rehabilitation centers. Aging is a natural process and it is necessary to live life well at this age. In connection with the quality of life we focused on the level of social protection and long-term care, active aging of seniors. We conducted a questionnaire survey, the aim of which was to find out what is the level of care and housing of seniors in a selected village.

We set 3 hypotheses:

- Hypothesis no. 1: Citizens of municipalities are sufficiently informed about provided social services.
- Hypothesis no. 2: Providing social services to citizens is at a good level.
- Hypothesis no. 3: Seniors are satisfied with the quality of housing in institutionalized facilities.

## 2.2. Evaluation of the questionnaire survey

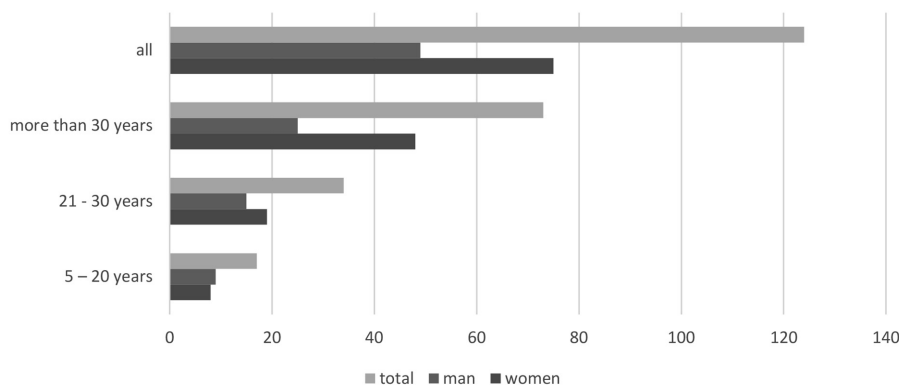
We conducted the survey using a questionnaire method. The respondents were residents in the selected municipality A. Of the total number of 150 questionnaires distributed, 124 returned, which is a return of 82.7%. 75 women (60.48%) and 49 men (39.52%) participated in the questionnaire survey.

**Q1:** How long have you been living in the city? In the question we wanted to find out how many years senior lives in the city or in the village, i.e. whether he knows the environment and has established social contacts. The responses show that 58.87% of seniors surveyed live in the city or municipality for more than 30 years, 27.42% from 21 years to 30 years and 13.71% of respondents. (Figure 1)

**Q2:** Who would you contact if you would like to get information about one of the social services? From an awareness point of view, we were interested in finding out where the respondents first sought information about the provided social service. First, the interviewees would inquire about social services between friends and family, people with a similar problem, and then contact the office staff. (Figure 2)

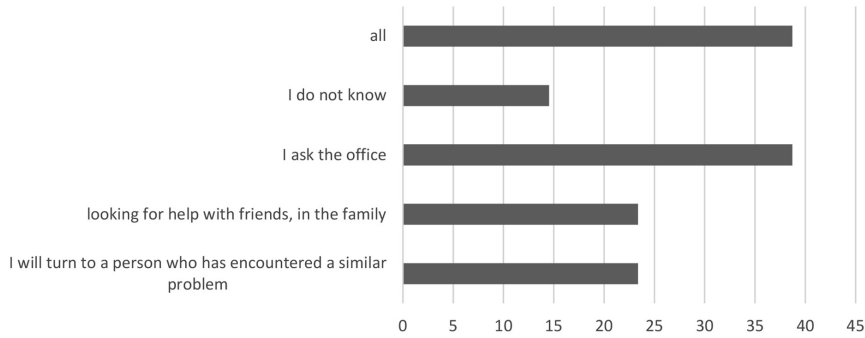
**Q3:** What type of social service do you use in the municipality? When using social services, we wanted to find out which service respondents use. The respondents use nursing services, 25%, catering services 54% and 20% of pensioners use accommodation services. (Figure 3)

Another question **Q4** was to find out how respondents are satisfied with living in an institutionalized facility. Of the total number of respondents, 72% of women and 10% man are satisfied with accommodation. 18% of women are less satisfied and 10% of women are unhappy with housing. (Figure 4). Based on the research, we confirmed the hypotheses: Hypothesis no. 1: Citizens of municipalities are sufficiently informed about provided social services. Hypothesis no. 2: Providing social services to citizens is at a good level. Hypothesis no. 3: Seniors are satisfied with the quality of housing in institutionalized facilities.



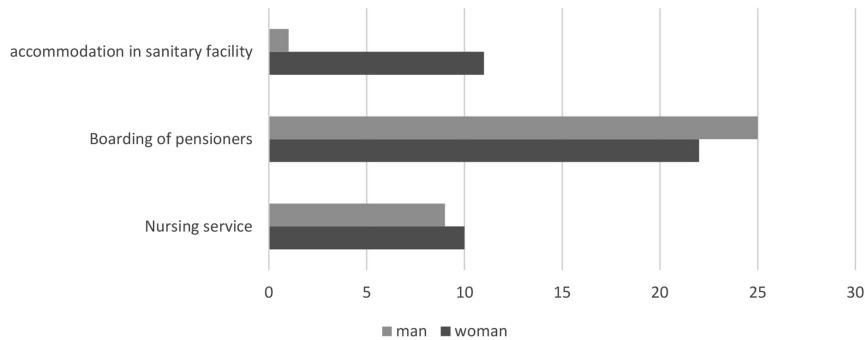
**Figure 1:** Life expectancy in the city

Source: self-processing based on self-survey data



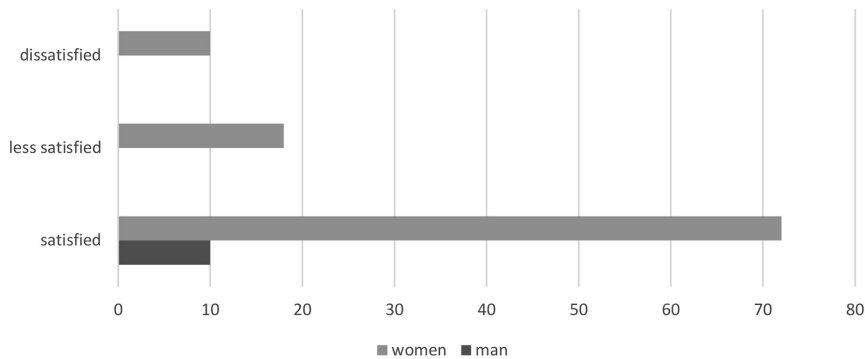
**Figure 2: Get information about social services (%)**

Source: self-processing based on self-survey data



**Figure 3: Types of social services provided in the city (%)**

Source: self-processing based on self-survey data



**Figure 4: Satisfaction with housing**

Source: self-processing based on self-survey data

On the example of selected municipality A, we examined what information they have about the possibility of providing social services, what types of services respondents use and what is the satisfaction with the quality of housing in institutionalized facilities. Respondents make the most use of accommodation services in facilities they are mostly satisfied with.

### 3. FUTURE RESEARCH DIRECTIONS

The aim of senior care is to create the conditions for comprehensive and multidisciplinary care, taking into account the environment in which the senior is located, and to enable individuals to age healthy, to lead an active and meaningful life even in old age. An irreplaceable role of nursing is to develop long-term care for the elderly in the home environment or in the community with a view to maintaining their family ties.

#### 4. CONCLUSION

Aging is a new phenomenon for mankind, coupled with health, social and economic changes that significantly affect the quality of life of individuals and consequently of society as a whole. The demographic development in Slovakia is in line with the trends of the European Union countries and points to an aging population. Quality of life is increasingly being said in relation to life expectancy. The results of our research point to the need to increase the overall quality of life of seniors. It should be borne in mind that seniors living in the home environment benefit, but their quality of life may be significantly affected by the lack of social contact. The quality of life assessment for us becomes the result of our interest in providing quality health care and at the same time brings knowledge for development in the field of social care.

#### ACKNOWLEDGMENT

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- <http://sites.utoronto.ca/qol/projects/seniors.htm>

# TREATMENT OF INTANGIBLE ASSET ACCORDING TO INTERNATIONAL ACCOUNTING REGULATION

Ana Milijić<sup>1</sup> 

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**Abstract:** *Rigidity of the financial reporting model in contemporary business conditions the era of the „knowledge economy” influenced the creation of significant differences between the market and book values of companies. Characteristic of enterprises in the „new” economy is the high share of knowledge and other intellectual resources in the structure of total assets, which are at the same time the basic source of competitiveness of enterprises. Given the changing habits of consumers who are inclined to buy products on the market that identify a high degree of „embedded” knowledge, companies base their business on investing in R&D and investing in various types of intellectual property and protecting them. Due to certain limitations of financial reporting when identifying and measuring intellectual resources in an enterprise, users of financial statements are unable to get a realistic picture of the value of assets and the corresponding investments when it comes to certain types of intangible assets. Blurred financial reality can lead to irrational decisions, stagnation in business and major financial crashes, which is often the practice of large companies listed on the world stock market due to the overestimation / undervaluation of their book value. The aim of this paper is to explain the treatment of intangible assets through international accounting standards concerning the identification, recognition and measurement of intellectual resources and intangible assets, to analyze their limitations and to point out possible directions for their further development in order to provide reliable and credible reporting on assets and capital of economic entities.*

**Keywords:** *intangible asset, international accounting standards, intellectual capital.*

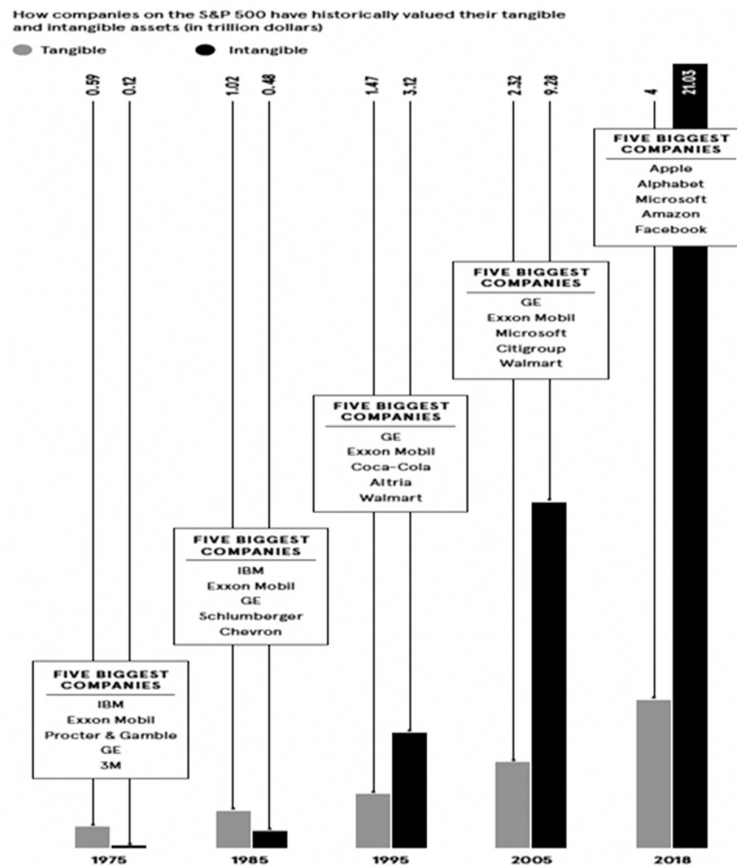
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## 1. INTRODUCTION

The process of globalization, market liberalization, technological and technological progress and the development of communication and information technology have influenced the creation of a „new” era in the economic sense, the so-called „knowledge economy”. In a “new” economy, knowledge gains primacy over traditional factors of production such as means of labor, physical resources, land, and capital. The main source of competitive advantage of the company in the modern economic environment are products and services that are the result of specific knowledge and abilities of employees and, due to their nature, customers are easily identified and accepted in the market. Consequently, in a knowledge economy, entities build their competitive advantage on knowledge and intellectual resources, which results in a high proportion of them in the relative structure of the enterprise’s business assets. Knowledge is an inexhaustible resource and if effectively managed in this sensitive category the limits of market success are almost non-existent. Accordingly, at the very beginning of the 21st century, there was a significant increase in the share of intangible assets in the structure of financial statements of world-renowned companies. This trend is particularly characteristic of companies belonging to the pharmaceutical industry and the IT sector, although an increase in R&D has also been observed in all other industries. For example, Amazon has invested most in R&D in 2018 with about \$ 22.6 billion, while Alphabet, Volkswagen, Samsung and Intel represent the other leading companies in the world in R&D investment.

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**Figure 1:** Tangible versus Intangible assets comparison in five biggest companies

**Source:** [www.visualcapitalist.com/wp-content/uploads/2020/02/intangible-assets-full-1.html](http://www.visualcapitalist.com/wp-content/uploads/2020/02/intangible-assets-full-1.html)

**Figure 1.** demonstrates the increase in the importance of intangible assets over the material presentation of the most successful companies over time.

The basic role of financial statements is reflected in the true and reliable presentation of the financial position and earning capacity of business entities. Innovation of products, services, business processes and continuous learning and development are becoming the ultimatum for success in the modern economic environment (Al-Ali, 2003), which is evidenced by the positive trend in terms of the participation of intangible assets, in the assets of world-renowned companies over time. In the conditions of the „new economy”, characterized by intensive use of intangible resources and a high share of them in the relative structure of business assets of the company, due to the lack of relevant information on certain categories of intangible assets and intellectual capital, the problem of unreliable reporting to external users of financial statements arises and thus get a clear insight into the real value of the company. The problem arises in the balance sheet coverage of these items of intangible assets, which is why often the gaps between the market and book values of listed companies are explained by the limitations and inability of adequate financial reporting on certain existing elements of intangible assets in organizations. The International Accounting Standards Board (IASB) addresses this one financial reporting problem through International Accounting Standard (IAS) 38 - Intangible Assets. Intangible assets are also processed through SFAS 142 (Statement of Financial Accounting Standards No. 142 - Goodwill and Other Intangible Assets) and also covered by SFAS 141 (Statement of Financial Accounting Standards No. 141 - Business Combinations) belonging to the group of Anglo-Saxon generally accepted accounting standards.

## 2. INTELLECTUAL CAPITAL AS A PART OF INTANGIBLE ASSETS

Changing economic conditions and entering a new economic era, in which knowledge and innovation are the main sources of creating and maintaining competitive advantage, there is a problem of explicit presentation and reporting of intangible resources, which certainly contribute to the profitability of enterprises and are not included in the balance sheet. In this sense, a new concept of „intellectual capital” has been identified, which represents that part of the intangible assets that an enterprise owns, and which significantly influences the growth of the enterprise’s market value, but is not presented in the balance sheet. The end of the 20th and the beginning of the 21st century, in economic terms, was marked by an upward and fast-growing trend of establishing a „knowledge-based enterprise” whose name implies entities that use their specific knowledge, expertise and innovations as the main source of competitiveness in the market. Characteristic of this type of enterprise is a very small share of tangible assets in relation to the significant share of intangible assets in the total assets of the enterprise. Due to their property structure, the problem of significant gap between market and book value is even more pronounced. A critical problem is the inability of the accounting system of an enterprise to reliably and credibly identify, measure and control individual segments of intangible assets and thus cannot be disclosed by the balance sheet, thereby „hiding” a portion of the invisible (intangible) assets of the enterprise. For this reason, it is often said that intellectual capital is that part of assets that are largely unaccounted for and that does not include tangible assets, financial assets and intangible assets (Krstic, 2014). According to Moore and Graig (2008), the value of intellectual capital is expressed as the difference between the market value and the book value of the enterprise:

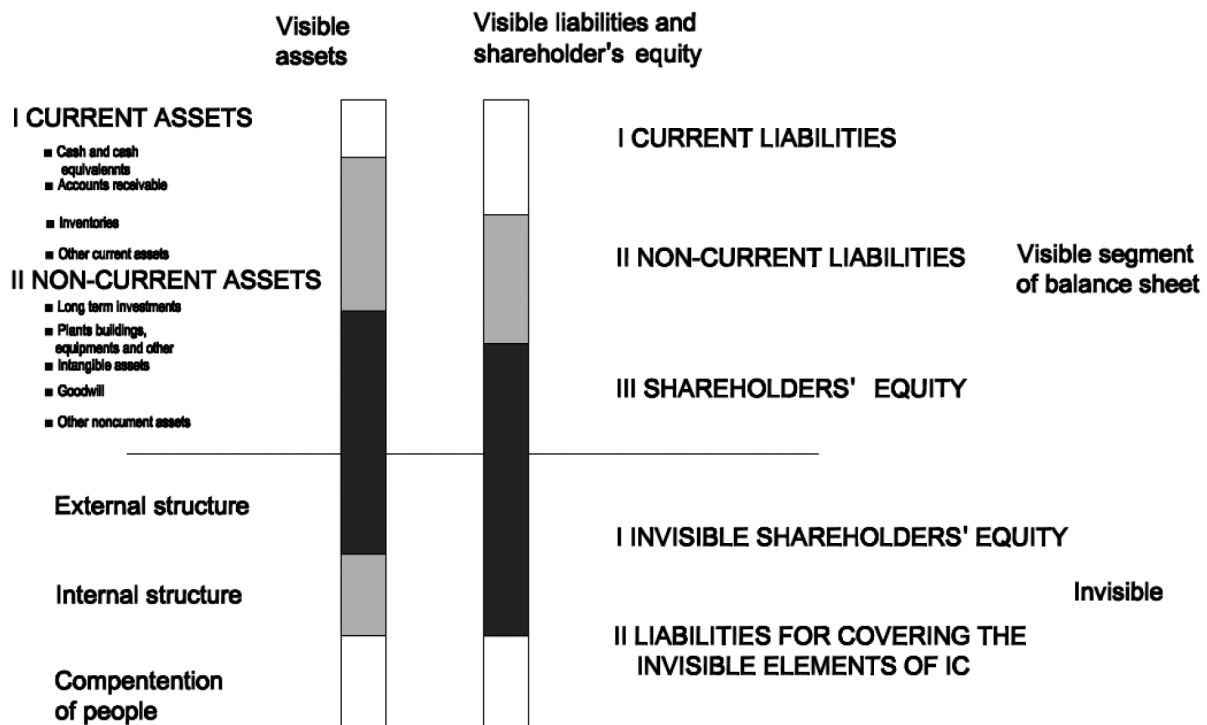
***Intellectual Capital Value (Intellectual Resources as Balance Sheet Unspecified Intellectual Property) = Market Value of Assets – The book value of the balance sheet assets of an enterprise***

To date, a number of intellectual capital concepts have been developed to explain this category. One of the more well-known is Sveiby’s concept, which divides intellectual „invisible” resources into three groups: human competence, internal structure and external structure. These three groups are invisible on the balance sheet, whereby the internal structure means information systems, management, patents, concepts, organizational culture, and the external structure builds the image of the company, product brand, publicity.

As the basis of the financial system there is a fear and aversion to financing „knowledge enterprises” in order to further develop their intangible assets, and due to the inability to „balance the embodiment” of invisible intellectual resources Sveiby (1997) considered that such organizations are mostly self-funded because of the difference between their market and book value, which he called „invisible share capital.”

The relationship between tangible and intangible resources in knowledge-based enterprises is illustrated in Figure 2.

As intangible investments and intellectual capital are characterized as a crucial resource of modern companies in the era of „knowledge economy”, to this day, certain doubts remain during their balance sheet coverage. It is considered that the intangible investments of companies in the modern economy reflect the future competitive advantages of organizations, and their balance sheet coverage is of key importance.



**Figure 2:** Balance sheet of knowledge-based enterprises

**Source:** Krstic, B., (2014) adapted to the idea Sveiby K.E., (1997), *The New Organizational Wealth-Managing and Measuring Knowledge-Based Assets*, Berrett-Koehler Publishers, Inc., p.11

### 3. ACCOUNTING INTEGRATION OF INTANGIBLE ASSETS ACCORDING TO IAS 38

The purpose of this standard is to define the process of accounting for intangible assets, provided that the said non-monetary assets are not subject to any other International Accounting Standard. IAS 38 requires an entity to recognize an intangible investment if and only if certain criteria are met. This standard also specifies the way in which the carrying amount of intangible assets should be measured and requires some disclosures about intangible assets.

Intangible asset is an identifiable non-monetary asset without physical substance. An asset is a resource that is controlled by the entity as a result of past events (for example, purchase or self-creation) and from which future economic benefits (cash inflows or other assets) are expected (IAS 38.8). The IASB under intangible assets includes the following categorized items and is illustrated in the Table 1.

Intangible assets can also be classified according to the following criteria (SRRS, 2007):

- the manner of acquisition, intangible assets acquired internally and intangible assets acquired through the purchase of others,
- identifiable, intangible assets that can be viewed separately from an enterprise, which can be leased or exchanged, and inseparable assets from an entity such as goodwill,
- exchange opportunities, monetizable assets that can be acquired and sold independently of the enterprise, and non-cash assets that cannot be sold or redeemed independently of the enterprise, and
- the expected period of use, assets with a defined period of use and assets without a defined period of use.



**Table 1: Categories of Intangible Asset Under IASB**

<b>Marketing-Related Intangible Assets</b>	<b>Customer-Related Intangible Assets</b>	<b>Contract-Based Intangible Assets</b>	<b>Technology-Based Intangible Assets</b>	<b>Artistic-Related Intangible Assets</b>
<i>Trademarks, Trade names</i>	<i>Customer lists</i>	<i>Licensing, Royalty, Standstill agreements</i>	<i>Patented technology</i>	<i>Plays, Operas and Ballets</i>
<i>Service marks, Collective marks, Certification marks</i>	<i>Order or production backlog</i>	<i>Advertising, Construction, Management, Service of Supply contracts</i>	<i>Computer software and mask works</i>	<i>Books, Magazines, Newspapers and other Literary work</i>
<i>Trade dress (unique color, shape, or package design)</i>	<i>Customer contracts &amp; related customer relationships</i>	<i>Lease agreements</i>	<i>Unpatented technology</i>	<i>Musical works such as Compositions, Lyrics and Advertising jingles</i>
<i>Newspaper mastheads</i>	<i>Non- contractual customer relationships</i>	<i>Construction permits</i>	<i>Databases</i>	<i>Picture and Photographs</i>
<i>Internet domain names</i>		<i>Franchise agreements</i>	<i>Trade secrets, such as Secret formulas, Processes, Recipes</i>	<i>Video and audiovisual material, including Films, Music, Videos, etc.</i>
<i>Non-competition agreements</i>		<i>Operating and Broadcast rights</i>		
		<i>Use rights such as Drilling, Water, Air, Mineral, Timber cutting &amp; Route authorities</i>		
		<i>Servicing contracts such as Mortgage servicing contracts</i>		
		<i>Employment contracts</i>		

**Source:** [www.brandfinance.com/Uploads/pdfs/Global%20Intangible%20Tracker%202006.pdf](http://www.brandfinance.com/Uploads/pdfs/Global%20Intangible%20Tracker%202006.pdf)

In order to increase intangible assets, businesses often invest resources or create liabilities. For example, they invest in the R&D process to create new products, improve technological processes, or provide more efficient and innovative services in order to create added value that customers are willing to pay. However, often the relevant acquisition costs cannot be recognized as part of the value of the intangible resources, although incurred to obtain them are already identified as an expense in the period in which they are incurred. Even certain forms of intangible assets cannot be recognized individually as such because they do not satisfy one or more of the prerequisites they entail (IAS 38,10):

- the ability to identify,
- control over the resource, and
- the existence of future economic benefits from the same.

The condition that a particular type of intangible asset can be separately identified is, among other things, differentiated from goodwill. Whether it is internally generated or acquired goodwill, it is very difficult to separate certain forms of intangible assets as a separate entity in accounting terms, subject to the balancing requirements listed above. For example, patents, licenses, concessions, issuing rights, pollution permits and similar forms of property that are protected by law are clearly stated on balance sheet, however the problem arises when the balance sheet needs to be expressed, for example additional skills and quality of a particular team within the organization, sophisticated management skills, a portfolio of good customer / supplier relationships; such forms of intangible assets are already recognized as internally generated goodwill, and „their value is determined by the difference between the entity’s market and book value.” (Zhang, 2013).

In order for a property to be identifiable, at least one of the following conditions (IAS 38,12) is required:

- separable, that is, when it can be separated or separated from an entity and sold, transferred, licensed, leased or exchanged, either individually or in conjunction with a related contract, identifiable asset or liability, whether or not the entity intends to do so; or
- arises under contractual or other legal rights, whether those rights are transferable or separable from the entity or from other rights or obligations.

Resource control, as a significant segment of intangible asset balancing, implies that an organization is capable of controlling the future economic benefits of a particular intangible resource, which is usually achieved by the existence of appropriate legal rights. Otherwise, it is difficult to successfully control the financial flows of a given asset and it is even more complicated to limit access to competitors by the same. For example, an enterprise has a specific portfolio of customers and makes significant efforts over time to earn their loyalty, while there is no right promised by law that the entity will protect its very significant intangible resource and manage to control their loyalty. The fact is that the organization has a real economic benefit from this intangible investment but the condition for controlling it is not fulfilled and cannot be included in the balance sheet. Benefits that cannot be disputed from this type of intangible asset and which, due to imbalances that lead to a gap in market and book values, can be controlled to some extent in the form of transaction. Depending on the amount of transaction exchanges, valuation and balance sheet presentation may be made to a certain extent, which will certainly reduce the market and book value discrepancy.

The future economic benefit of any resource in an enterprise may not necessarily be construed as a cash inflow in the form of income from the sale of a product or the provision of a service through a given asset. Intangible assets are characterized by the fact that their possession has the effect of reducing production costs, shortening the time to produce products / services, increase productivity, or by restricting their intellectual property rights to competitors in the business.

The most important issue for users of financial statement information is to comply with the basic accounting principles and principles (truthfulness, reliability, credibility...) in creating them. If the process of recognition and measurement of all items in the company is adequately implemented, then the market value will correspond to the book value. Due to the lack of physical substance of intangible assets, the process of recognition and measurement of intangible assets is considered to be very delicate. Therefore, it is necessary to define precisely the criteria for recognition and measurement of intangible assets.

Under IAS 38, intangible assets are recognized if it is determined that the entity has the ability to identify it, control it, and if it is certain that it will benefit from future economic benefits. One of the crucial conditions for the recognition of intangible assets is the ability of an entity to reliably determine its cost. In accordance with IAS 38 (24), intangible assets are initially measured at cost. Due to its characteristics, most of the intangible assets do not usually require additional costs in terms of replacement and maintenance, as is the case with equipment and buildings. However, when there are subsequent expenditures, they are very difficult to attribute to the value of intangible assets and are treated as expenses in the income statement. Subsequent expenditures in connection with trademarks ("brands"), impressions, publishing titles, customer lists and items similar in content (whether externally acquired or internally generated) are always recognized in profit or loss as incurred. Such expenditures are indistinguishable from

enterprise-wide development expenditures (IAS 38, 63-64). The justification for this treatment lies in the fact that it is very difficult for such expenditures to meet the definition and criteria for balancing them as part of the assets of the balance sheet, so according to expectations of future economic benefits, these expenditures are categorized as expenses and classified in the income statement for the period in which created.

The measurement of separately acquired intangible assets is made using reasonable assumptions and taking into account the pervasive economic conditions. The act of purchasing a particular intangible asset is proof that management expects future economic benefits from the intangible asset, and one of the conditions for balancing intangible assets is thus fulfilled. As regards vesting, the cost of separately acquired assets includes (IAS 38,27):

- purchase prices, including import duties and taxes on non-refundable turnover, after deduction of trade discounts and rebates;
- any directly attributable costs of preparing the property for its intended use.

Examples of directly attributable costs are (IAS 38,28):

- costs of remuneration of employees (defined in IAS 19) incurred directly in the process of bringing the assets to working condition;
- professional benefits incurred directly in the process of bringing the property to working condition;
- the cost of testing the proper functioning of the property.

Examples of expenditures that do not form part of the cost of an intangible asset are (IAS 38.29):

- the cost of introducing a new product or service (including the cost of advertising and promoting);
- the cost of running a business in a new location or with a new group of customers (including staff training costs), and
- administrative and other overheads.

These expenses incurred for the purpose of putting the intangible asset into operation are offset against the cost of the intangible assets, with all subsequent expenses if they are incurred in the future to be recorded as expenses in the period in which they were incurred without being attributable to the cost of intangible assets.

#### **4. ACCOUNTING TREATMENT OF INTERNALLY GENERATED GOODWILL**

The issue of reducing the difference between the entity's market and book value is significantly affected by the accounting treatment of internally generated goodwill. Given that in a knowledge economy, competitive advantage stems from knowledge and innovation, companies around the world are investing heavily in the R&D sector. Therefore, the issue of accounting treatment of these investments under IAS 38 is highly debatable. Under this standard, internally generated goodwill is not recognized as an asset because it does not meet the requirements for recognition as intangible assets and the difference between market and book value does not represent the cost of the asset but is the result of a number of factors that affect the company internally and externally. However, a group of authors involved in the recognition of intangible assets (Lev, 1997; Sveiby, 1997; Moore & Graig, 2008) find that accounting treatment of intangible resources expenditures has the greatest impact on the difference in book value and market value. For

this reason, revised IAS 38 established requirements for the recognition of internally generated goodwill, defining and separating the process of internally generated goodwill into the research phase and the development phase. Expenditure that occurs in the exploration phase cannot be recognized as intangible assets under IAS 38 because there is still no prototype or invention that can be expected to generate future economic benefits, and therefore all expenditures related to this phase are accounted for as an expense in the period in which they occur. Examples of such expenditures are: the cost of acquiring new knowledge, trying to apply new ideas and knowledge, the cost of searching for new innovative materials, technological procedures, etc.

Intangible assets that may arise in the development phase are recognized as assets if the entity can prove the following (IAS 38,57):

- the technical feasibility of completing the intangible assets so that they will be available for use or sale;
- its intention to complete the intangible property and to use or sell it;
- your ability to use or sell intangible assets;
- how intangible assets will generate probable future economic benefits. Among other things, an entity may demonstrate the existence of a market for the product of intangible assets or the intangible assets themselves or, if used internally, the usability of the intangible assets;
- availability of adequate technical, financial and other resources to complete development and use or sale of intangible assets;
- its ability to reliably measure expenditure attributable to tangible assets during its development.

The reason for treating expenditures as a part of the value of intangible investments in the development phase is the existence of visible results from R&D activities, because the development phase is by its nature more advanced than the research phase. So, within the development phase we have projects, prototype and model development, pilot projects, testing of adapted devices, materials, test of new production processes, etc. Due to the possibility of their identification, control and expected positive economic effects as well as reliable measurement, the value at this stage is recognized as part of the cost of intangible assets.

## **5. CONCLUSION**

The era of the knowledge economy has brought about a series of changes in the business of modern businesses. Knowledge and innovation have become strategic resources for businesses to compete. Therefore, the structure of the balance sheet assets also changed in favor of intangible assets. Traditional accounting systems have not been able to provide a complete and true picture of the state and changes in the assets and capital of the company, which is why significant differences between the market and book values of modern knowledge intensive companies have emerged. The problem of partial or total balance sheet non-recognition of intangible assets has provided a blurred picture to users of financial statement information, which has led to an undervaluation / overestimation of the value of listed companies. In order to remedy this problem, the IASB has succeeded in mitigating this gap somewhat by offering IAS 38-Intangible Assets from 2009 and providing some solutions to the balance sheet treatment of intangible resources. We are witnessing frequent and almost daily amendments, amendments and introduction of new acts that seek to resolve this open-ended issue.

## ACKNOWLEDGMENT

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# THE OUTSOURCING IN CREDIT INSTITUTIONS, INVESTMENT FIRMS AND IN PAYMENT AND ELECTRONIC MONEY INSTITUTIONS

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**Abstract:** *The creation of a solid and effective system of government, as well as the development of the company subject, sometimes advise the outsourcing of functions in order to achieve agility and efficiency. The Guidelines EBA/GL/2019/02 starts from a basic idea and is that it is aware of the new technologies to carry out the credit business. The subjective scope of application of the Guidelines not only affects credit institutions, but also extends to investment services companies and payment and electronic money institutions. Then, it is necessary to analyse how the new guidelines on outsourcing fit into the referred institutions.*

**Keywords:** *Outsourcing, Financial market, Governance, Business, Supervision.*

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## 1. INTRODUCTION

The financial crisis that began in 2007 demonstrated the need for the profound reform that the European legal system has undergone to date. In the particular sector of banking, the legal doctrine has analysed the reasons and the whys of the financial crisis<sup>2</sup>. The truth is that we cannot reproduce the reasons for the birth of the crisis, as their variety and extent would lead us to diminish the importance we seek in our work. However, we consider it necessary to stress that, from the point of view of the European institutions, the crisis was analysed in the de Larosière Report of 25 February 2009<sup>3</sup>, which highlighted the relaxation of the risk control mechanisms of credit institutions, mainly due to the lack of supervision by the administrative bodies of the institutions and the supervisory authorities of each country. The report also criticized the parsimony of the owners for not exercising the control that the shareholders meeting, as the governing and supervisory body of the institution, should exercise<sup>4</sup>.

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<sup>2</sup> OLIVENCIA, M., (2009), “Crisis financiera internacional. La respuesta española: introducción (planteamiento de la problemática)”, *Revista de Derecho Bancario y Bursátil*, núm. 115, Madrid, 13-18.; MARTÍNEZ GONZÁLEZ-TABLAS, A., M<sup>a</sup>., (2011) “Contexto y dimensión financiera de la crisis”, *Revista de economía crítica*, núm. 11, Barcelona, 22-44.; VIÑALS, J., (2010), “Reflexiones sobre la crisis financiera internacional”, *Revista del Instituto de Estudios Económicos*, núm. 1, Madrid, 25-40.; MASSA, J., (2009), “Algunas reflexiones sobre la crisis financiera”, *Revista de Derecho Bancario y Bursátil*, núm. 115, Madrid, 19-29.; CONTHE GUTIÉRREZ, M., (2009) “El aniversario del euro y la crisis financiera”, *Revista Española de Derecho Europeo*, núm. 29, Madrid, 5-15; LINDE DE CASTRO, L. M<sup>a</sup>., (2009) “La crisis financiera internacional y la Unión Europea”, *Revista de Derecho de la Unión Europea*, núm. 16, Madrid, 139-154.; RODRÍGUEZ FERNÁNDEZ, J. M., (2011), “Crisis financiera y regulación de la solvencia bancaria: una reflexión crítica sobre los Acuerdos de Basilea”. *Revista de economía crítica*, núm. 11, Barcelona, 65-95.

<sup>3</sup> TAPIA HERMIDA, A. J., (2009) “El Informe Larosière de febrero de 2009 sobre la crisis financiera”, *Revista de Derecho Bancario y Bursátil*, núm. 114, Madrid, 282-285.

<sup>4</sup> DURÁN CASTIÑEIRA, B., (2015) “El informe anual de gobierno corporativo”, *Comentario práctico a la nueva normativa de gobierno corporativo, Ley 31/2014, de reforma de la Ley de Sociedades de Capital*, ARIAS VARONA, F. J., RECALDE CASTELLS, A. J., (Coord.), Dykinson, Madrid, 217-220.

As a result of this report, in 2010 the European Commission published a Green Paper, which reviewed the shortcomings in corporate governance of financial institutions. The shortcomings focused mainly on the lack of controls and countervailing powers, which had allowed directors ample room for manoeuvre while allowing for group thinking on the part of the board of directors, which meant less intense debate, fewer ideas and therefore fewer alternatives at board meetings. There was also criticism of the high remuneration of directors and certain employees, whose remuneration structure was focused on the short term and not sufficiently compensated by the results obtained by the company<sup>5</sup>.

Directive 2013/36/EU<sup>6</sup>, in its recital 53, points out that systemic problems at global level, in Member States and the collapse of a number of institutions have been caused by weak corporate governance in institutions, excessive and imprudent risk-taking, the general nature of corporate governance arrangements and the existence of non-binding codes, the lack of effective internal control mechanisms, the lack of management strategies and, finally, the lack of effective supervision.

In addition, the Bank for International Settlements July 2015 „Principles of Corporate Governance for Banks” focus on analysing: the responsibilities of the board, the composition and qualifications of the board, board structure and best practices, the bank’s management, the governance of group structures, the role of risk management, risk identification, monitoring and control, risk communication, compliance, internal audit, remuneration, information and transparency and, finally, the role of supervisors.

Therefore, one of the conclusions that can be drawn is that there is a lack of ethics<sup>7</sup> in the management of credit institutions. The excessive appetite for risk, together with a lax control of the institutions’ risks, has led to European regulations allocating specific articles to risk management, so as to banish from the system a short-term mentality, the aim of which is to distribute dividends in a short period of time.

Thus, the reform focuses on two fundamental pillars: on the one hand, all the new regulations focus on the control of the risks of the credit institutions, and on the other hand, on the capital margin, which are used to determine the level of solvency of the institutions. The Basel III<sup>8</sup> principles establish a balance between the risks assumed by the institution and its capital buffers, so that the risk map<sup>9</sup> that the company prepares must be in line with these buffers. Thus, a risk map that demonstrates that the company’s capital buffers can be exceeded will lead the management body to adopt measures to mitigate such risk exposure.

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<sup>5</sup> SÁNCHEZ-CALERO GUILARTE, J., (2013) “Crisis económica y gobierno corporativo”, *Revista de Derecho Mercantil*, núm. 287, Madrid, 63-88.

<sup>6</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

<sup>7</sup> FERNÁNDEZ DE LA GÁNDARA, L., (1993-1994) *Derecho, Ética y Negocios*, Discurso de la apertura del Año Académico, Universidad de Alicante, [www.cervantesvirtual.com](http://www.cervantesvirtual.com).

<sup>8</sup> CALVO VÉRGEZ, J., (2014) “Principales rasgos configuradores de la regulación del sistema financiero acordada en Basilea III y su progresiva implantación en nuestro ordenamiento bancario”, *Revista de Derecho Bancario y Bursátil*, núm. 135, Madrid, 201-231.

<sup>9</sup> MARÍN HERNÁNDEZ, S., GRAS GIL, E., (2005) “Auditoría interna en las entidades de crédito: Áreas y matriz de riesgos”, *Gestión: revista de economía*, núm. 34, Murcia, 15-29.; BANCO DE ESPAÑA, *Guía para la elaboración de la matriz de riesgos*, Versión de 28-03-2012.



## 2. THE COMPANIES WITH LIMITED RESOURCES

Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013, on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, sets out basic principles where companies will establish corporate governance procedures, but also recognises the principle of proportionality in view of the nature, scale and complexity of the credit company.

There is no detailed treatment of the legal ideas underlying the application of the principle of proportionality. Perhaps the *mens legis* of the rule is clear, since obviously the same corporate governance obligations cannot be demanded from banks as capitalist companies as from credit cooperatives, whose scope of action does not go beyond one region.

As regards nature, in our opinion, we maintain that if we approach the typology of companies that operate in the financial market, we can distinguish between those that are capitalist based and those that are mutualist based<sup>10</sup>. Banks are capitalist based companies, while savings banks and credit unions are mutualist based companies. However, in accordance with the regulations on management and supervision, their corporate purpose is not limited, i.e. the activity of the entity is not predefined by the corporate form, so that capital-based companies operate in free competition with mutual-based companies.

Thus, capitalist companies and mutual companies, in accordance with their corporate purpose, and with certain specific exceptions, may all carry out the same activity, so that the corporate form cannot be considered as a defining element determining the scope of the principle of proportionality<sup>11</sup>.

In terms of the scale and complexity of its operations, the company's activity cannot be separated from the risks it bears. From the reading of the European regulations<sup>12</sup> it is not possible to separate the activity from its risks, so it does not seem that the principle of proportionality can be applied according to the activity it carries out. The company's risk map<sup>13</sup> is important because, although this element does not only include the risks derived from the corporate purpose, it will provide decisive elements for the supervisory body.

<sup>10</sup> SÁNCHEZ CALERO, F., (1976) "Los conceptos de sociedad y de empresa en la Ley de Cooperativas", AA.VV, *Libro Homenaje a Ramón M<sup>a</sup> Roca Sastre*, Vol. III, Junta de Decanos de los Colegios Notariales de España, Madrid, 493; VICENT CHULIÁ, F., (1977) "La sociedad en constitución", *Revista Crítica de Derecho Inmobiliario*, núm. 518, Madrid, 71-130., GIRÓN TENA, J., (1964) "Los conceptos y tipos de sociedades en los Códigos Civil y de Comercio y sus relaciones", AA.VV, *Estudios del Centenario de la Ley del Notariado*, Tomo IV, Ministerio de Justicia, Madrid, 1; AÑOVEROS TRÍAS DE BES, X., (1998) "Razón de ser de las sociedades personalistas", AA.VV, *Estudios de Derecho Mercantil. Homenaje al Profesor Justino Duque Domínguez*, Vol. I, Universidad de Valladolid, Valladolid, 149-162.; PAZ-ARES, C., (1999) "La sociedad en general: elementos del contrato de sociedad", AA.VV, URÍA, R., MENÉNDEZ, A., (Coord.), *Curso de Derecho Mercantil*, Vol. I, 1<sup>a</sup> ed., Civitas, Madrid, 482.

<sup>11</sup> VERCHER MOLL, J., (2018) "Aplicación del principio de proporcionalidad a las entidades que operan en el mercado financiero", *Revista Aranzadi de Derecho Patrimonial*, núm. 47, Pamplona, 140.

<sup>12</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. Regulation (EU) 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

<sup>13</sup> RODRÍGUEZ LÓPEZ, M., PIÑEIRO-SÁNCHEZ, C., DE LLANO MONELOS, P., (2013) "Mapa de Riesgos. Identificación y Gestión de Riesgos", *Revista Atlántica de Economía*, núm. 1, Vol. 2, A Coruña, 1-29.

The risk map dynamically includes the risks to which the company is subject through integrated management. Thus, the company's governance system is configured around the identification of the risks as the main objective and delimiting, each one of them, with an assessment of the acquired risks<sup>14</sup>. Therefore, taking into account the risk analyses carried out by the company and the verification carried out by the supervisor, this public administration will be able to calibrate the application of the principle of proportionality.

The European Banking Authority's Guidelines on Corporate Governance<sup>15</sup> dedicate Title I to the principle of proportionality. This states that significant institutions will have more sophisticated governance systems, while smaller and less complex institutions may apply simpler systems. In line with this idea, it establishes a list of criteria according to which institutions must configure their system of governance and warn the supervisory authorities in the performance of their duties.

The criteria relate to such essential elements as the company's balance sheet, the geographical presence and volume of its operations, the legal form and group of which it forms part, whether the entity is admitted to trading, whether it uses internal models for calculating capital requirements, the type of authorised activities and services performed by the entity, the underlying business model and strategy, the nature and complexity of the business activities and the organisational structure of the company, the risk strategy, risk appetite and actual risk profile of the company, also taking into account the outcome of capital and liquidity assessments, the ownership and financing structure of the company, the type of customers and complexity of products or contracts, outsourced activities and distribution channels, information technology systems.

However, we consider that the criteria referred to do not really solve the problems generated by their application, since their scope is not detailed, for example, to the different areas that make up the system of government, the internal control mechanisms and their contingency plans, etc. At this point, in order to solve the problem, the Guidelines in some points indicate when the system of government can be relaxed in application of the principle of proportionality. Thus, proportionality will be possible in processes, strategies and policies; in the risk committee, remuneration committee and appointments committee.

According to the obligations contained in the Directive, it is questionable whether it is possible to outsource part of the company's organisational structure. Such an approach is not trivial, given the increasing obligations of credit companies from an organisational point of view. Examples are the new obligations arising from data protection regulations; or the obligations under money laundering regulations, whose provisions include the obligation to appoint a representative to the Commission's Executive Service, etc.

The December 2006 Committee of European Banking Supervisors (CEBS) Guidelines on Outsourcing provide important information on this subject. They set out basic principles on the definition of outsourcing, the system of accountability to the outsourced firm, delegation of tasks,

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<sup>14</sup> GARAYETA BAJO, A., ITURRICASTILLO PLAZAOLA, I., DE LA PEÑA ESTEBAN, J. I., (2012) "Evolución del capital de solvencia requerido en las aseguradoras españolas hasta Solvencia II", *Anales del Instituto de Actuarios Españoles*, núm. 18, Madrid, 147.; PÉREZ FRUCTUOSO, M<sup>a</sup>. J., (2005) "Análisis de los riesgos de las aseguradoras bajo Solvencia II", *Revista Española de Seguros*, núm. 122, Madrid, 245-266.; RODRÍGUEZ-PARDO DEL CASTILLO, J. M., ARIZA RODRÍGUEZ, F., (2015) "El riesgo de modelo en la industria bancaria y aseguradora: Propuestas para su evaluación, control y mitigación", *Análisis Financiero*, núm. 129, Madrid, 52-66.

<sup>15</sup> EBA/GL/2017/11

deposit taking, procedures and policies to be included in the outsourcing agreement, control of risks arising from outsourcing, clarity in the wording of the outsourcing contract and access to confidential information, relationship of the outsourcing firm and the Supervisory Authority.

### **3. THE OUTSOURCING OF FUNCTIONS**

Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, does not include the possibility of outsourcing part of the company's organization, but the Directive does not prohibit it.

For credit institutions, the possibility of outsourcing governance is recognised in the European Banking Authority's Guidance on Internal Governance. In particular, Guidelines 90 to 93 set out the basic premises for a policy on the outsourcing of functions.

However, Guidelines 90 to 93 are not sufficient to regulate something as complex as the relations of the credit institution with the outsourced company, the characteristics of such companies, the mechanism of liability and assumption of obligations, the reporting mechanisms between the credit institutions and the company to which a service has been outsourced, the monitoring to be carried out by the credit institution, etc.

On the outsourcing of services to cloud service providers, the Recommendations<sup>16</sup> of the European Banking Authority aim to provide institutions with clarity if they wish to benefit from the advantages of outsourcing services to the cloud while ensuring proper identification and management of risks; and to promote supervisory convergence regarding expectations and processes applicable to cloud outsourcing.

But the rules of outsourcing focus only on cloud services, so they do not apply to any other service or subject of the company being outsourced. Thus, on 25 February 2019 the European Banking Authority (EBA) published the Final Report of the Guidelines on Outsourcing Arrangements<sup>17</sup>, which aims to set out specific provisions for the governance systems of all financial institutions within the scope of the EBA's mandate, with regard to their outsourcing arrangements and related supervisory expectations and processes.

The new Guides standardise outsourcing services into a single Guide, so that the EBA/REC/2017/03 Guide on Cloud Services, whose activity will be affected by the new Guide, and the December 2006 Committee of European Banking Supervisors (CEBS) Guidelines on Outsourcing are repealed.

### **4. EBA/GL/2019/02**

The Guide starts from a basic idea: it is aware of the new technologies for performing the credit business. Thus, it shows the interest of credit institutions to subcontract or outsource activities whose purpose is to reduce costs and improve their flexibility and efficiency. This can be seen, fundamentally, in the context of digitalisation and the growing importance of new financial

<sup>16</sup> EBA/REC/2017/03.

<sup>17</sup> EBA/GL/2019/02.

technology providers (fintech), so it is easier for credit institutions to outsource such services than to develop them through their own areas or services.

Therefore, the subjective scope of application of the Guidelines does not only concern credit institutions, but also extends to investment firms and payment and e-money institutions.

#### **4.1. Concept of outsourcing**

Guideline 12 states that outsourcing means an agreement between a credit institution, an investment firm, a payment institution or an electronic money institution and a service provider whereby the service provider performs a process, service or activity that would otherwise be performed by the aforementioned institutions.

The idea behind outsourcing is to encompass any activity, process or service of a company. It is possible to question what its impact is on the company's governance system. It is at this point that the obligation arises to distinguish between outsourcing of all or part of the company's corporate purpose and, on the other hand, the outsourcing of own functions, whose internal management of the company is key to controlling the development of the company itself.

#### **4.2. Critical or important functions**

One of the issues to be studied in the face of the phenomenon of outsourcing is the extent of outsourcing. The Guide distinguishes critical or important functions from non-critical ones. Furthermore, it should be stressed that the identification of critical or important functions is based on the text of Directive 2014/65/EU (MiFID II) and the Commission's Delegated Regulation (EU) 2017/565, which complements MiFID II and is used only for outsourcing purposes.

Guidelines 29 to 31 consider outsourced functions as critical or important when a defect in their operation would affect the conditions of their administrative authorisation or obligations under Regulation (EU) No 575/2013, when the outsourcing may affect the company's internal control or when the activity of the company to be outsourced requires an administrative authorisation under the terms of Directive 2013/36/EU. Thus, this means focusing on the outsourcing of functions that affect the internal control of the company or affect its business lines.

In order to know if outsourcing affects any critical or important function, the Guide establishes the need to analyze the following parameters: whether the outsourcing arrangement is directly related to the performance of banking activities or payment services for which the credit institution is authorised; the potential impact on the credit institution of any disruption of the outsourced function or failure of the service provider to provide the service on an ongoing basis; the impact on the company that may affect the identification, monitoring and management of all risks, compliance with all legal and regulatory requirements and the conduct of appropriate audits with respect to the outsourced function; the potential impact on the services provided to its customers; the ability to reintegrate the outsourced function into the institution; the protection of data and the potential impact of a breach of confidentiality or lack of guarantee of data availability and integrity on the institution or the payment institution and its customers.

However, if the Guide focuses its regulation on the outsourcing of critical or important functions, this means that, at least from a theoretical point of view, there are functions in companies

that can be outsourced without being subject to the Guidelines. In practice, this possibility is remote, given that any outsourcing can affect the company's risks. In this regard, the overlap of all areas or functions of the governance system is such that it will be difficult to fit an outsourcing arrangement that is not in accordance with the Guidelines.

### **4.3. Effects on the system of government**

Title III of the Guidelines reflects the European Banking Authority's concern about what the impact of the outsourcing arrangement on the system of governance will be. The concern is centred on the increase in the company's risks, which leads to the conclusion that these risks are fundamentally of an operational nature given the outsourcing of functions. However, this conclusion may be erroneous, due to the fact that the reference to risks is generic, so that the outsourcing does not harm the company.

However, this does not mean that an externalisation that increases risks cannot be carried out, as the principle of proportionality must be weighed up. The Guide points out that the identification, assessment, monitoring and management of all risks resulting from agreements with third parties should not be neglected.

Outsourcing must be articulated through certain basic rules that the Guidelines develop on. For this reason, we will now analyse the need to maintain good governance of the company despite outsourcing, to have an outsourcing policy, to regulate the methods for preventing and resolving possible conflicts of interest, the business continuity plan, the internal audit function and documentation requirements.

#### **A) *Maintenance of good governance of the company***

Guidelines 35-40 set out a central idea: outsourcing of functions cannot lead to delegation of responsibilities of the management body. Thus, responsibilities for the management and representation functions of the management body cannot be entrusted to the company providing the outsourcing service. It is obvious that the management body will not only have to define the governance system but will also be responsible for it, so if it outsources any element of the company it will assume the responsibility. All of this is without prejudice to the measures that the management body itself can adopt to resolve its deficiencies.

The guidelines detail the responsibilities of the management body in the event that functions of the governance system have been outsourced. Thus, the management body must ensure that the company continues to fulfil its obligations to maintain the administrative authorisation that enables it to carry out the corporate purpose; it must also carry out a specific function focused on supervising the relationship between the company and the company carrying out the outsourced function, all with the aim of ensuring compliance with the outsourcing agreement, so as to avoid risks associated with outsourcing, as well as conflicts of interest.

Furthermore, the guidelines do not forget the need for outsourced functions to maintain the subjective requirements of good repute, experience and professional qualifications that are required of any system of governance of credit or payment institutions. This is to ensure that the institutions performing the outsourced functions do not lack the necessary expertise to perform the outsourced work.

## **B) *Outsourcing policy***

Directive 2013/36/EU establishes that companies must have solid corporate governance procedures, which affect the organisational structure, risk control, internal control and remuneration system, etc. Therefore, we conclude that the outsourcing of some of the functions of the governance system must be included in a procedure in order to maintain transparency and sound prudent management.

In this regard, Guidelines 41-44 are based on the rule that companies should approve, periodically review and update a written outsourcing policy and ensure its implementation. To this end, the outsourcing policy should define the principles, responsibilities and processes in relation to outsourcing; in particular, who has the ability to choose the outsourced company, the lines of the company's business that can be outsourced, the procedures for the identification, assessment, management and mitigation of potential conflicts of interest, the business continuity plans, the process for approval of new outsourcing agreements.

On the other hand, as regards the control of the outsourced company, the outsourcing policy must establish the bases through which the company can carry out constant supervision of the outsourced company, strategic changes to the outsourcing agreement, review of compliance with all legal requirements, the renewal process, as well as the process of extinction of the outsourcing contract, either supervening or in response to the natural termination of the contract due to compliance.

## **C) *Conflicts of interest***

Guidelines 45-47 set out the obligation for companies to identify, assess and manage conflicts of interest with respect to their outsourcing arrangements. However, the guidelines emphasise the conflicts of interest that can arise within a group of companies.

In addition, if the outsourced service provider is part of a group of companies that may generate conflict with other companies. Thus, the company seeking to outsource its governance system must ensure that there is no conflict of interest in providing the outsourced service. However, without prejudice to the possibility of exploiting synergies, the service provider must guarantee its independence, even if it forms part of a group of companies.

## **D) *Business continuity plan***

Guidelines 48 and 49 state that companies should establish, maintain and periodically test appropriate business continuity plans with respect to critical or important outsourced functions. These continuity plans should take into account the possible event that the quality of the provision of the outsourced critical or important function deteriorates to an unacceptable level or fails. Such plans should also take into account the potential impact of insolvency or other failures of service providers and, where relevant, political risks in the service provider's jurisdiction.

The business continuity plan goes beyond a viability plan that reflects a situation of financial deterioration<sup>18</sup>, but must ensure that, whatever happens to the outsourced service provider, the company continues with the development of its activity.

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<sup>18</sup> VALPUESTA GASTAMINZA, E., (2018) "El llamado gobierno corporativo de las entidades de crédito", AA.VV, *Cuestiones controvertidas de la regulación bancaria*, GONZÁLEZ VÁZQUEZ, J. C., COLINO

The preparation of the continuity plan is not a trivial matter. Replacing one service provider with another is not usually a quick process; it requires the analysis of different parameters. We believe that the plan should revolve around certain questions such as the mechanism for reversing the service outsourced to the company, whether the company has staff with sufficient capacity and knowledge to assume, even temporarily, the functions that were outsourced. Therefore, the plan must establish the bases of the analysis to assess the impact of the extinction of the outsourced service on the ordinary development of the corporate purpose of the entity. Finally, the continuity plan must refer to the contracting policy for the designation of a new supplier if the company's administrative body so decides.

#### **E) *Internal audit function***

Guidelines 50 and 51 regulate the obligation of companies to conduct a periodic review of outsourced services. Thus, it entrusts the internal audit function with its review according to a plan, which should analyse whether the outsourcing arrangement, including the outsourcing policy, is being implemented correctly and effectively. In addition, it must review whether the plan is in accordance with applicable laws and regulations, the risk strategy and the decisions of the management body.

The internal audit function shall ensure that the outsourced company complies with the aforementioned suitability requirements and that the outsourcing of the functions or role does not increase the company's risk to a greater extent than if the service had not been outsourced, i.e. was carried out internally by the company.

The reason for this is the important work done by the internal audit function. According to the Basel Committee on Banking Supervision's Principles of Corporate Governance for Banks of July 2015, internal audit provides independent advice on the quality and effectiveness of a bank's internal control, management and risk systems and processes<sup>19</sup>. It is a kind of internal police force that reviews the management of the institution during the development of the corporate purpose.

Finally, internal audit will review whether there is adequate participation by the governing bodies in the outsourcing agreements, as well as the periodic monitoring and control of the outsourcing agreements.

#### **F) *Documentation requirements***

To complete the analysis of the effects on the company's governance system of the outsourcing arrangement, Guidelines 52 to 60 set out certain documentation and registration obligations for companies that outsource part of their services. The obligations that we will analyse below may be redundant, so it seems clear that documentation of outsourcing agreements must exist, but the aim is to ensure the consistency or traceability of companies' outsourcing agreements.

Companies should properly document all current outsourcing arrangements, distinguishing between the outsourcing of critical or important functions and other outsourcing arrangements. In addition, they shall create a register in which they shall collect all information on outsourcing.

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MEDIAVILLA, J. L., (Dirs.), Wolters Kluwer, Madrid, 175.

<sup>19</sup> SILES TALENS, A. L., (2016) "Fuentes regulatorias del gobierno corporativo y tendencias", AA.VV, *El Gobierno Corporativo de las Entidades Bancarias*, LÓPEZ JIMÉNEZ, J. M<sup>a</sup>., (Dir.), Thomson Reuters-Aranzadi, Cizur Menor, 113.

The register shall include at least the following information for all existing subcontracting agreements: a reference number for each subcontracting agreement; the start date and next renewal date of the contract, the end date and/or notice periods for the service provider and for the company; a brief description of the outsourced function, including what data is outsourced and whether personal data has been transferred or whether its processing has been outsourced to a service provider; the name of the service provider, the company identification number, the address and other relevant contact details, and the name of its parent company (if applicable); the country or countries where the service will be performed, including the location of the data; whether the outsourced function is considered critical or important, including, where applicable, a brief summary of why the outsourced function is considered critical or important; in the case of outsourcing to a cloud service provider, the cloud service and deployment models, and the specific nature of the data to be maintained and the locations where the data will be stored; and finally, the date of the most recent assessment of the importance of the outsourced function.

All this information must be available to any public administration with the capacity to supervise the companies, mainly the banking authority of each country and the European Banking Authority. In addition, the companies must communicate to the banking authority of each country which functions or departments of the company have been outsourced, and the changes that have taken place during the outsourcing agreement.

#### **4.4. The Outsourcing Process**

Analyzed the effects that the outsourcing of functions may have on the company's governance system. The EBA/GL/2019/02 Guide extensively analyzes the basic elements for the process of choosing the company that will provide the outsourced service. The outsourcing process is a matter of internal organization of each company, in accordance with its own policy and procedure manual, both in the choice of the service provider and in the interrelationship between the latter and the company.

Finally, it should be noted that the regulation of the outsourcing process in the Guide leads to a tacit extension of the subjective scope of application. As the Guide points out, in Guidelines 7 and 8, the addressees are credit institutions, investment firms and entities providing payment services; however, the Guide's regulation causes entities with the capacity to provide the outsourced service to adapt to the requirements that a priori are only intended for the mentioned companies and not for the outsourced ones.

##### **A) *Prior analysis***

Guidelines 61-73 provide as a kind of pre-outsourcing procedural manual. The company will first monitor whether the service provider is authorized to perform the outsourced activity, in the event that the service requires authorization. In addition, a risk assessment will be carried out, focusing on the operational risk that the outsourcing may entail for the company. Therefore, various simulations will be carried out in order to plan the effects of various events that may affect the development of the service, whether they are external, computer or human errors. In view of the risks, they will be weighted with the benefit or cost that can be generated for the company, so that a significant increase in the risks may discourage the outsourcing of a service or function.

On the other hand, it is possible that the service provider subcontracts the provision of the service, in which case, the credit institution or payment service provider must analyze the risks that



such subcontracting may generate, because the company must know in detail who the service provider actually is.

Finally, in order to make a proper selection of the service provider, the company must conduct a due diligence to determine whether the service provider has the business reputation, adequate and sufficient capabilities, experience, resources, organizational structure and, if applicable, regulatory authorization or registration to perform the critical or important function in a reliable and professional manner to fulfil its obligations during the term of the contract.

## **B) *Contract phase***

Once the service provider has been selected, the Guidelines 74 to 99 start from the principle that the rights and obligations of the parties must be clearly documented. To this end, the Guidelines indicate that they will be expressed in the contract document: the functions assigned to the service provider, the start and end date of the contract, applicable regulations, financial obligations of the parties, if possible the subcontracting by the service provider, the location of the service and the location of the data that the service provider collects during the execution of the contract, the company's supervision over the service provider, the alerts that the service provider must provide to the company, whether the service provider must take out insurance for any damage it may cause to the entity, access to the data collected by the service provider, the obligation for the service provider to cooperate with the competent authorities and the termination of the contract.

However, problems arise when the service provider outsources critical or important functions. In this case, the credit institution or payment service provider will have to specify in the outsourcing agreement whether and to what extent it allows outsourcing. Thus, the institution seeking to outsource must set out the necessary guidelines for carrying out the monitoring work, not only on the service provider, but also on the outsourced provider. In this sense, the aim is to prevent companies from increasing their risk by means of a network of subcontracting.

On the other hand, the outsourcing of the service also generates problems in the security of data and systems, in which case, the contract should state whether the service providers comply with cyber security standards. Thus, companies must provide the service provider with the data and system security parameters within the outsourcing agreement and monitor compliance with these requirements on an ongoing basis. To this end, the processing of personal data<sup>20</sup> will be ensured, as well as the location of the storage service provider.

In addition, the contract should reflect that the internal audit function may review the outsourced function using a risk-based approach. So that an oversight activity of the outsourcing arrangement is performed to ensure compliance with all applicable regulatory and contractual requirements.

Finally, the subcontracting agreement should expressly allow the possibility for the credit institution or the payment institution to terminate the agreement, in accordance with applicable law, either for breach of contract itself or for failure to comply with instructions given by the

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<sup>20</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

supervisory authority to the service provider. Even in the event that the contract is terminated because of the above circumstances, the contract should clearly set out the obligations of the existing service provider, in the case of a transfer of the outsourced function to another service provider or back to the institution, including the processing of the data. In addition, establish an appropriate transition period, during which the service provider, after termination of the outsourcing agreement, will continue to provide the outsourced function to reduce the risk of disruption; and include the service provider's obligation to support the company in the orderly transfer of the function in the case of termination of the outsourcing contract.

### **C) *Supervision of outsourced functions***

Once the outsourcing contract has been concluded, the Guide shows its concern with how the credit institution or payment service provider and the service provider relate to each other during the execution of the contract. Therefore, Guidelines 100-105 order such a relationship. Thus, as a basic idea, they establish that institutions will have the capacity to monitor the service provider with a risk-based approach, taking into account the availability of information and data and, in turn, ensuring its security and integrity.

In addition, if as a result of their supervision they detect an increase in risk due to the actions of the service provider, they shall inform the administrative body of the latter so that it can adopt measures to rectify the risks revealed.

If deficiencies are identified, credit institutions or payment service institutions should take appropriate enforcement or corrective action. Such actions may include termination of the outsourcing agreement, with immediate effect, if necessary.

### **D) *Termination of the contract***

Finally, Guidelines 106 to 108 set out the consequences of termination. Thus, credit institutions or payment services institutions should have a documented strategy for termination of the contract, i.e., institutions should have a procedural manual that regulates the guidelines to be followed when the contract is terminated.

One of the most important issues is that, as a consequence of the termination of the contract, the company's commercial actions are not paralyzed, the compliance with the legal requirements in the development of the corporate purpose is not limited and, all this, without detriment to the continuity and quality of the services rendered to the clients.

In this sense, it is particularly relevant because the procedure manual mentioned, which must develop and implement exit plans that are comprehensive, documented and, where appropriate, sufficiently tested. In addition, it should identify alternative solutions and develop transition plans that allow the credit or payment service institution to remove outsourced functions and data from the service provider and transfer them to alternative providers or back to the institution, or take other measures that ensure the continued provision of critical or important function or activity in a controlled and sufficiently tested manner.

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# E-COMMERCE AND CHALLENGES TO CONTROL

Plamen Iliev<sup>1</sup>

DOI:

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**Abstract:** *The topic of e-commerce has become more and more relevant in the last few years. With the advancement of technology and the ever-increasing power of the internet, many people choose this type of presentation instead of the classic “physical” store or office. Of course, this has its advantages: saving a lot of costs, unlimited market, saving time in endless shopping, and more.*

*With the ever-expanding Internet market, online shopping and retailers offering similar types of services have also become more frequent. Tax authorities are increasingly paying attention to this growing industry. In the tax practice, there are already a large number of merchants who have been severely sanctioned for failing to comply with legal requirements for online business.*

*With regard to the distance selling of goods and services / via e-commerce or otherwise / within the EU there are specific provisions in the European VAT Directive creating obligations to register and charge VAT in the country of consumption. Member States tax administrations are also looking for new and more effective digital business control methods to reduce non-taxation and to increase tax collection. That is why a number of countries are introducing electronic audits / audits / on the basis of enhanced exchange of information and control in real time, such as the new requirements of the H-18 Regulations for cash registers and the introduction of CPRMS / Commercial Property Revenue Management System. The topic presented on the need and application of electronic controls and audits has been particularly relevant in recent years globally. It is linked to the rapid pace of e-commerce development and the increasing profits in the sector at the expense of tax avoidance. This is precisely where the research proves the need to apply and develop control over e-commerce, in conclusion, it can even be assumed that the organization and implementation of electronic control / audit is even delayed.*

**Keywords:** *e-commerce, e-control, audit, online store, distance selling.*

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In recent years, globalization and technological change have led to an e-commerce boom. Through the use of new means of interaction, transactions are concluded electronically for the sale of goods, at which goods are shipped or transported between two places within the territory of the country and from one EU Member State to another or from third countries / territories to a country or another Member State. Sales of goods made electronically shall mean deliveries in which the supply of goods is affected by the use of an electronic interface such as a market, platform, portal or other similar means. E-commerce is predominantly targeted at end-users of traded goods - taxable persons.

The world's single digital market is estimated at € 415 billion annually and covers 500 million consumers. Between 2008 and 2016, the revenue of the top five online marketers increased by an average of 32% annually. For comparison, the overall growth of the retail segment is only 1%. This rapid development also requires new regulations, the European Commission is convinced. With regard to the distance selling of goods (via e-commerce or otherwise) within the EU, there are specific provisions in the European VAT Directive that create obligations for VAT registration and charging in the country of consumption. Of course, these definitions are not intended to be comprehensive and to cover all aspects of the digital business. In this regard,

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the EC has a number of initiatives that we can expect in one form or another to be implanted / transposed into law, such as a „web tax” or „countervailing tax” for digital companies that generate advertising revenue in a Member State, but they do not have a registered company or a place of business, administrative facilities regarding the reporting of mini one stop shop (MOSS) VAT for online shops and more.

In certain cases, the described deliveries of goods may be defined as remote sales to which specific rules apply. Commodity sale is the supply of goods for which the following conditions are fulfilled simultaneously:

- the goods are dispatched or transported by or on behalf of the supplier from the territory of a Member State other than the one in which the transport ends;
- the supplier of the goods is registered for VAT purposes in a Member State other than that in which the transport ends;
- the recipient of the supply is a person who is not obliged to levy VAT on the intra-Community acquisition of the goods in the Member State where the transport ends;
- goods are not new vehicles; or not installed and / or installed by or at the expense of the supplier; or not subject to a special order for taxing the price margin on second-hand goods, works of art, collectibles and antique items.

In the case of distance selling, there is a specificity with regard to determining the place of delivery, to which the provision of the VAT Act applies. For a distance seller, a VAT registration obligation in another / other Member States may arise upon reaching a certain turnover of such sales as defined in the relevant legislation.

Although it is virtually located on-line, **the online store carries on a normal commercial activity, concludes commercial transactions, and for this reason its activity should be fully compliant with the applicable legislation** regarding invoicing and accounting.

Many confuse e-commerce with sales platforms (like OLX.bg for example). The platforms are not e-shops and therefore they do not issue invoices on sale. However, their shops need to carry out all the activities inherent in „ordinary” shops - business registration, VAT registration, etc.

This means that in order to have an online store and offer goods and services over the internet, you must have a registered company, issue invoices and pay taxes.

E-commerce has been the focus of the NRA’s attention since 2013, when the first control team was formed at the NRA Headquarters. In 2015, a Pilot Project on the Program for Reducing Risk Levels for Identified Issues and Gaps in E-Commerce was developed and implemented. **In April 2016, a specialized Electronic Audit Department was established and is operating within the Control Directorate at the Headquarters of the National Revenue Agency.** In addition, specialized control and monitoring software has been created and used by e-audit and e-commerce teams at the NRA TD, which work in close cooperation with a number of other control bodies - the Ministry of Interior, Agency „ Customs or similar units in tax administrations of EU countries.

This is necessary because of the clear outline of the main problems in the sector, such as anonymity of the trader, non-reporting of sales turnover, significant number of signals from citizens, non-compliance with tax and social security legislation, disregard for consumer rights of citizens, etc.

Taxation of value added tax (VAT) on supplies of goods made electronically is no different from the taxation of supplies made through traditional means of sale in terms of determining the place of performance and the nature of the supply, the taxable amount and the taxpayer. There is a difference regarding the determination of the date of the tax event, which is not determined by the general rule but by the special rule of the VAT.

Tax audits in this area are still relatively low because there are not enough inspectors competent in internet investigations and data analysis, but steps are being taken to increase them. Last year, according to NRA data, more than 350 inspections and audits of electronic merchants were carried out, and over 2.5 million levs of tax and social security liabilities, mainly from undeclared turnovers, were collected from completed audits.

Legal turnover has already reached \$ 340 million, according to a recent Nielsen data, and according to other sources, online sales in Bulgaria are over \$ 580 million in 2018.

According to the National Statistical Institute, the vast majority of consumers who have shopped on the Internet (87.5%) have used Bulgarian e-shops and 35% of them have used online stores within the European Union. Therefore, the Revenue Agency has focused its efforts to introduce additional transparency in this type of trading.

The internet offers anonymity that is used by marketers to stay in the grey business and hide taxes and social security from their business. A small number of Bulgarian sites provide merchant information so that the user knows who is coming, according to the NRA. Usually, consumers know who exactly they bought the product from when they received it - on the consignment note. But even this is not certain, because often the document refers to an individual, not a trader.

The Law on E-Commerce obliges every e-merchant to publish on his site identification data - name, BULSTAT, address, landlines, i.e. information that should provide seamless customer service. Both the NRA and the Consumer Protection Commission warn that shopping from anonymous sites carries great risks. And typically, unfair commercial practices go hand in hand with breach of tax laws.

One of the measures the NRA is already taking to bring online merchants to light and make them recognizable by consumers is the introduction of a registration regime for them. It is a difficult task, considering that according to the industry data, online stores in our country already exceed 30 thousand.

The procedure is by filling in an electronic form on the NRA website with information - who is the trader, the e-shop and the goods with which he trades. The register is made public to be useful to consumers who will be able to consult who they are actually shopping for. Requirements have also been introduced and are already being applied to courier companies to identify the online merchants they work with. The use of a courier is the main way of delivery of goods purchased from the Internet in Bulgaria. There is no requirement in the legislation governing courier companies to identify the consignor of the goods and to store such data.

The new regulation is proposed through a number of changes to the Regulation on sales reporting at retail outlets / REGULATION -№ 18 /, regardless of the series of deferrals for its entry

into force together with CPRMS / Commercial Property Revenue Management System/ - the last since January 2020.

The National Revenue Agency insists on one more thing - it is obligatory to pay the overpayment over a certain threshold from the courier to the merchant by bank transfer. It is a common practice for a courier to collect cash from end customers when delivering the goods and to transfer the money to the merchant every day or for a period of two or three days, depending on the turnover. It is seldom used to transfer this money by bank transfer. So, the risk of running backs and saving tax is very high. Therefore, it is considered that if the amount of cash on hand exceeds BGN 10,000 (the cash payment threshold) within a year, the courier is obliged to transfer the amounts paid by the end customers by bank transfer.

NRA have already detected tax fraud schemes on the Internet, which are possible because of the seller's anonymity.

A major challenge for the NRA authorities is the wide internationalization of internet shopping. Online trading platforms are practically operating across Europe. Therefore, every tax administration's efforts are to register every major foreign e-commerce store that sells on its territory in VAT registration. This ensures that sales are charged with VAT, which goes into the national treasury. In this endeavor, however, revenue agencies in Europe face great difficulties, despite the specific Euro-directive on the digital economy.

The NRA admits that it is not easy to track whether foreign online merchants have exceeded the VAT registration threshold in Bulgaria. On the one hand, the current provisions of the Euro Directive make it easy for e-marketers to circumvent them. On the other hand, EU tax offices are not working well and are not yet prepared for the new business models. Especially for the Bulgarian e-commerce sites, the NRA has resorted to other ways to catch the hidden turnover - collecting information from third parties, increasing the number of teams that will carry out these checks.

Establishing an online business, identifying a person and analyzing data from an e-commerce site requires the use of special software, and therefore the skills of the examiner must be more specific. So, the efforts of the NRA are also directed towards training of this type of inspectors, and in 2019 much more e-commerce inspections were conducted on the basis of problems identified in previous years.

And if e-commerce already has some practice and guidance on how to exercise tax control, then there are other problematic areas where adequate control is even more difficult, such as:

- popular **shared travel and tourist accommodations** are an unknown but problematic area. One of the first difficulties with the so-called a shared economy is the identification of participants in a „transaction”, and it is difficult to gather evidence that a transaction actually exists. Illegal buses with passengers who have paid to be transported to any country or country are usually understood when an accident occurs - a catastrophe or a fraud. Most often the wording is that friends have gone on a field trip. And no one admits that he actually uses the service he paid for;
- accommodation websites pose the same problems to tax authorities because tourists are increasingly using online platforms to find short-term rental apartments that are far cheaper than hotels. However, who owns these homes and what exactly their address



is, it is only when the service is paid. Therefore, at the end of 2019, Parliament has finally decided that all owners of apartments or rooms rented through platforms such as Airbnb and Booking should pay patent tax by adopting changes to the Local Taxes and Fees Act through the transitional and final provisions of The Tax and Social Insurance Procedure Code.

For accommodation with no more than 20 rooms, categorized with one or two stars, or registered under the Tourism Act, the tax is determined for a room according to the location of the object - from BGN 25 to BGN 250.

As mentioned above, according to industry data, nearly 30,000 are electronic retailers in Bulgaria, but no more than 1,000 have real turnovers. Most are electronic stalls - with one person, a small number of items and sporadic sales, according to the **E-Commerce Association**, and it is these retailers that scorch internet users. They cannot guarantee the availability of the advertised items, delay the delivery, and when dissatisfied customers want to return the purchased goods, they most often refuse because this is their only sale for the month. E-commerce Association stands behind regular / decent / online merchants and disagrees with the NRA's claim that many of the e-shops are anonymous and their owner can hardly be identified.

As part of the measures and e-commerce is also a mandatory requirement since the beginning of 2018. to online merchants to register with the Customs Agency e-Portal to receive an „EORI” number, which will provide opportunities for information exchange through the use of electronic data processing facilities.

The registration for the economic operator is one-off and unified for all electronic services offered by DG TAXUD and the Customs Agency, and at the stage of requesting specific services additional specific data may be required to operate the specific service, such as valid „EORI” number One-time registration will provide opportunities for submission of customs and / or excise documents electronically, as well as access to DG TAXUD's central electronic services and national electronic administrative authorities servants of the Customs Agency.

The registration and requirements for the exchange and storage of information through the use of electronic data processing facilities is regulated by Order No. ZAM-1203 / 13.09.2017 of the Director of the Customs Agency under Art. 66b, para. 2 of the Customs Act, promulgated in the State Gazette no. 77 of 26/09/2017.

Hundreds of reports have been filed in recent years with the Commission for Protection of Competition and the National Revenue Agency against defective e-commerce companies. Complaints range from low-quality goods received to unissued receipts. Conducting commercial activities on the Internet is not related to the requirements to the traders for compliance with the licensing regimes, which exist and are obligatory when conducting activity in physical commercial sites.

Pursuant to the VAT Act and Regulation H-18 / for cash registers-fiscal devices / „e-shop” is an internet site through which goods / services are sold through the conclusion of a distance contract under the Consumer Protection Act and which has a built-in functionality for selecting, including and excluding goods / services in a shopping cart, entering customer information, shipping address and selecting a payment method.

Recent changes to Regulation H-18 require **a person who is obliged to issue cash receipts** and who sells goods or services through **an online store**, before commencing an activity to sell goods / services through an electronic store, **to submit** information electronically **with electronic signature** in accordance with the procedure of DOPC through an electronic service in the NRA e-Services Portal, accessible on the NRA website. This applies regardless of whether the person uses his or her own domain, a rented domain, or the domain of another person providing a platform for online sales.

**Exception:** E-shops that are not obliged to issue a cash voucher are not obliged to declare themselves in the NRA. This is confirmed by the response of the NRA to KiK Info, as well as the explanations of the NRA by the Question and Answer System.

There is no doubt that the classic e-commerce site is commercial point-of-sale CPRMS, as it can be used to manage sales and it contains a database of requests and sales made. And if payments that require the issuance of a cash voucher are accepted, this CRMS should be approved by the NRA through the manufacturer and duly registered in the NRA by the user.

It has turned out that the introduction of an CPRMS for e-commerce is a whole challenge under the NRA schemes, which allows e-marketers in one single scheme to enter e-sales manually into the CPRMS, and that is when sales are made through platforms (such as eMag, Amazon, eBay, AliExpress, etc.) rather than through their own online store. For this reason, many e-marketers have opted to avoid CPRMS at all costs by refusing to accept payments that require the use of a cash register and have switched to payments via postal money order only for which it is not necessary to use a cash register.

The general rule for avoiding CPRMS is:

- There should be no need for a cash register at a retail outlet that has unregistered CPRMS;
- And vice versa - in a retail outlet that has a cash register, there should be no access to software with features of the CPRMS.

Online merchants must register their activities in the NRA, this is one of the requirements in the new Ordinance H18 for reporting to the National Revenue Agency, even though in the State Gazette no. 8 of 28/01/2020, the amendments to Ordinance H-18 on Online Stores have been published, **which stipulate that for reporting of absent credit and debit cards payments the e-shop may not issue a cash voucher from a fiscal device**, but instead issue another document under the conditions specified by the regulation. It is important to note that the current amendments to the H-18 Ordinance also introduce **new requirements for merchants** who use postal money order as their payment method. E-shops where payments are only **via postal money order and bank transfer are exempt from using a fiscal device**. Therefore, these traders continue to be exempted from using an approved and registered NRA, CPRMS.

What is new about online stores is that when payment is made through postal money order, they must provide their customers with an electronic or paper document containing the necessary information.

Controlling e-commerce in today's dynamic trading relationship is not only imperative, but somewhat delayed. When technology development is at such high levels and implies and pro-

poses similar developments in other sectors, such as commerce and, in this case, electronic, offering minimal effort and cost to the end user, the state control authorities must respond appropriately. This is caused by actions to protect state interests and put all traders on equal terms and obligations. The foregoing alleged turnover of e-commerce companies in our country led to the development of control over e-commerce and the creation of e-audit in the NRA, which implies its further development and improvement.

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# DIGITAL ECONOMY AS A CHALLENGE TO THE FORMATION OF INTELLIGENT INFRASTRUCTURE OF TECHNOLOGICAL DEVELOPMENT AT INDUSTRIAL ENTERPRISES

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**Abstract:** *The problem of the impossibility to ensure the technological development of industrial enterprises in the new economic conditions of digitalization based on traditional approaches developed for the conditions, in which modern high-tech enterprises no longer operate, determined the core scientific idea of the study. It forms a conceptual model for the intelligent infrastructure of technological development at industrial enterprises based on the principles of infrastructure-reproduction approach.*

*Domestic and foreign management theory presented with a variety of concepts, including those focused on modern aspects of management, due to structural changes in the economy based on digital technologies, do not give a sufficiently clear idea of the management features of the intelligent infrastructure formation for technological development at industrial enterprises in the new economic conditions. This is an urgent scientific problem to be solved.*

*The proposed concept is based on methods of system analysis and scientific modelling, economic-statistical methods (grouping, typing, constructing time series, determining ratings, etc.), to analyze and compile statistical information, identify trends and characteristics of technological development at industrial enterprises, analytical method when performing analytical calculations, graphical method for the visualization of the results.*

*From the infrastructure-reproduction approach the article reveals the components of the conceptual model for intelligent infrastructure of technological development at industrial enterprises, and presents the essential links between them, due to the task of achieving the target results in the field of technological development in the digital economy. The presented model can influence the management orientation of a modern industrial enterprise and the choice of an acceptable organizational solution in the field of staff intellectual resources management for its technological development. These results will allow developing research, designing and implementing organizational and management systems and mechanisms to ensure the technologization based on effective intellectual and resource support in the industrial sector in the digital economy.*

**Keywords:** *Intelligent infrastructure, Intellectual resources, Infrastructure and reproduction approach, Technological development, Industrial enterprises, Digital economy, staff.*

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## 1. INTRODUCTION

In modern conditions of world economy development, one of the most relevant and important factors for economic growth is the digitalization of the economy.

It is the digitalization of the economy that becomes a priority for the innovative development of economic systems and a tool for creating long-term competitive advantages.

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The study of the processes of forming and developing the digital economy, and, consequently, the directions of digital enterprises transformation in the context of the fourth industrial revolution development is becoming more and more relevant.

The world leader in the digital economy share in GDP is the USA (10.9 %), the second is China with its share of 10%, and in Russia's GDP is 3.9 %, which is almost 2.5 times lower than in leading digital economy countries (Table 1) [1].

**Table 1.** The contribution of the digital economy to Russia's GDP and its components in comparison with other countries, %

	Russia	USA	China	5 Western European countries*	Brazil	India
Household spending in the digital sphere	2.6	5.3	4.8	3.7	2.7	3.2
Companies' investments in digitalization	2.2	5	1.8	3.9	3.6	2.7
Government digitalization costs	0.5	1.3	0.4	1	0.8	0.6
ICT export	0.5	1.4	5.8	2.5	0.1	5.9
ICT import	-1.8	-2.1	-2.7	-2.9	-1	-6.1
<b>Total</b>	<b>2.9</b>	<b>10.9</b>	<b>10</b>	<b>8.2</b>	<b>6.2</b>	<b>6.3</b>

\* Great Britain, Germany, Italy, France, Sweden

Industrial enterprises cannot exist without modernization in the digital economy. Modernization should be aimed at qualitative changes to meet the principles of system theory, where the main one is development. The modernization of an industrial enterprise at the output provides qualitatively new opportunities, including technical, financial and economic stability of the enterprise [2, 3].

The main principles of the modernization concept are: the principle of innovation by Joseph Schumpeter; the principle of the evolutionary approach in Economics [4, 5]; the principle of cyclical development [6]; the principle of technological dynamics and economic growth [7, 8, 9].

The problem is that the practical work on the transformation of an industrial enterprise and its modernization is based on the terminology of the fourth industrial revolution (industry 4.0), which has not been fully formed, due to the speed and scale of changes [10].

Industry 4.0 involves the creation of digital enterprises based on the digitization of all physical assets and their integration into the digital ecosystem together with partners taking part in the value chain. At a fundamental level of the fourth industrial revolution there is the transition from simple ICT-enhanced digitalization to innovations based on combinations of technologies [11].

## 2. METHODS

The study as a whole (at the stages of solving all its tasks) is focused on a dialectical approach to the study of socio-economic systems formation and development patterns, methodology of system analysis, as well as a logical approach (formal and mathematical logic), involving objectivity and comprehensiveness of consideration, not contradiction, sufficient justification.

In the process of accumulating information, factorological, empirical and statistical material, it is necessary to carry out scientific observation on the basis of non-complete statistical observation using the statistical method of the main sample population array investigation. Analysis of trends, updating the formation of the intelligent infrastructure for technological development at industrial enterprises in conditions of diversification and technological modernization in modern economy, is carried out on the basis of a systematic approach using methods of analysis, synthesis, systematization on the basis of economic and statistical methods of statistical summary and grouping, presentation of statistical data, ranking.

The proposed concept is based, in total, on: methods of system analysis and scientific modeling as part of the study of the intelligent infrastructure for technological development in the integrity, unity and interconnection of its constituent parts; economic and statistical methods (grouping, typing, building dynamics series, determining ratings, etc.) to analyze and synthesize statistical information, to identify trends and peculiarities of scientific and technological development at industrial enterprises; calculation and analytical method when performing analytical calculations; graphical method for rendering the obtained results.

### 3. RESULTS

Thus, the conditions of modern socio-economic transformation impose special requirements for managing the technological development of industrial enterprises on an innovative basis and necessitate the creation of an intra-company relatively autonomous system for providing intellectual resources, among which the intellectual resources of the staff and their intellectual potential play the important role [12].

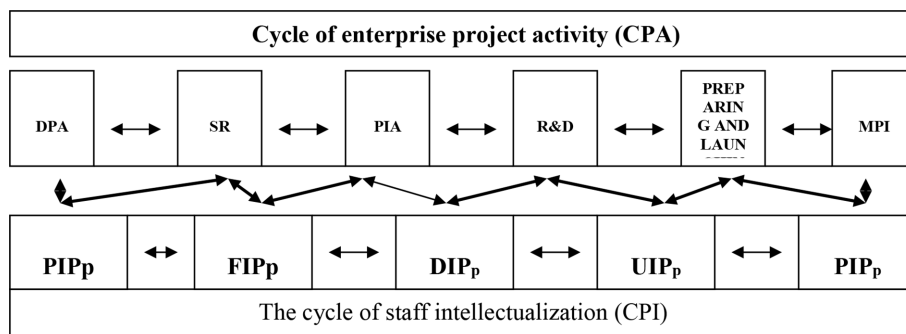
In connection with the formation and development of the digital economy, to be a global trend in technological development, the problems of increasing the innovative activity of industry have become one of the priority modern economy ones. In such conditions, a goal-oriented formed team of highly intelligent employees is the basis for effective intellectual and innovative activity of an industrial enterprise. It increases the level of its production and, consequently, its competitiveness. As a result, managing the intellectual potential of the company's staff, including the implementation of management functions for its planning, formation, development, use and transformation into economic potential, becomes an inevitable necessity.

The main prerequisites determining the need to create an in-company system for managing employees' intellectual resources as part of the enterprise management system are:

- the need to develop strategies and tactics in the field of managing staff's intellectual resources;
- a wide list of functions for managing staff's intellectual resources;
- the need to improve information and analytical support for the process of staff intellectualization;
- the need determined by the economic feasibility of improving the quality of management decisions made in relation to the process of staff intellectualization;
- the possibility of reducing the degree of uncertainty and risk in the implementation of innovative projects of technological development at the enterprise;
- the need to coordinate the interaction of many different departments of the enterprise, whose activities are related to the intellectual resources of the staff;
- the specifics of tools and methods for managing staff's intellectual resources;

- the ability to improve the efficiency of the distribution and use of staff's intellectual resources, belonging to the active part of the company's intellectual assets affecting the efficiency level of the use of other company assets (tangible and intelligent);
- a real possibility of multiplying the company's income from the effective use of intellectual resources of staff in the field of technological development projects on an innovative basis.

Thus, the process of staff intellectualization at the modern technological enterprise should be integrated into the cycle of project activity, having a significant impact on its economic results (Figure 1).



**Figure 1:** Relationship between the company's project activity cycles and staff intellectualization:

DPA – development of the project activity, SR - scientific researches; PIA - planning innovative activities, R&D – research and development work, MP – mass production, MPI – managing the product implementation, PIPp – planning the intellectual potential of staff, FIPp – formation of intellectual potential of the staff, DIPp – development of intellectual potential of the staff, UIPp – use of the intellectual potential of staff, TIPp – transformation of the intellectual potential of the staff

The basis for the effectiveness of the interconnections between CPA and CPI is a certain goal-oriented management impact on the intellectual potential of the staff, both in qualitative and quantitative terms. It affects the economic results of innovative projects of technological enterprise development.

Define the main elements of the conceptual model for intelligent infrastructure of technological development at industrial enterprises and their functional significance (Table 2), designed as a set of interacting object and subject of management, to provide the necessary parameters of management indicators.

Then the conceptual model for the intelligent infrastructure of technological development at industrial enterprises can be presented as follows (Figure 2).

In total, the presented model for intelligent infrastructure of technological development at industrial enterprises can influence the management of a modern industrial enterprise and the choice of an acceptable variant of an organizational solution in the field of staff management, from the point of view of the interests of its technological development. This allows:

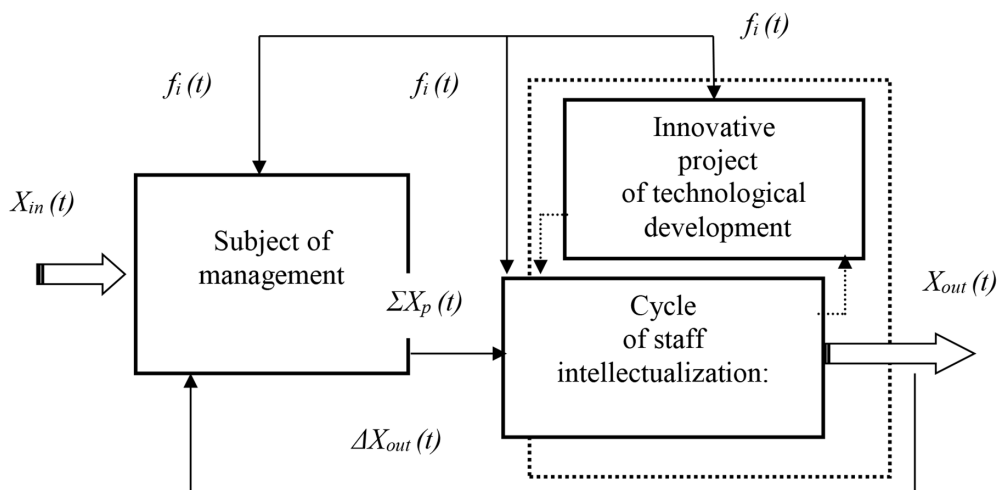
- making links between the management system of employees' intellectual resources and the general enterprise management system;
- taking into account factor influence of the internal and external enterprise environment;



- specifying the elements of an in-company system for managing employees' intellectual resources;
- forming criteria for effective enterprise employees' intellectual resource management;
- determining the tools for managing impact on the process of staff intellectualization in order to achieve the management targets.

**Table 2.** The main elements of the conceptual model for intelligent infrastructure of technological development at industrial enterprises

Model element	Functional value of the element
Management object is the process of staff intellectualization	Providing the required mode of dynamics of the staff's intellectual potential by specially organized management
The subject is module for innovation-oriented staff intellectualization management ( <i>MIOPI</i> M), including subsystems: - producing and improving the staff's intellectual potential; - effective use of intellectual potential	<i>MIOPI</i> M is intended for constructive participation in innovative processes of technological development at the enterprise as a subject through managerial influence on the staff's intellectual potential to achieve the targets of technological development
The result of managing staff intellectualization is the output value $X_{out}(t)$	Management performance indicator ( $X_{out}(t)$ is staff's intellectual potential, $\Sigma IP_p$ )
Team impact on <i>MIOPI</i> M	A given team (input) impact on the subject of management ( $X_{in}(t)$ is the reference values <i>IOPIM</i> )
Managing (regulating) influence on the process of staff intellectualization ( $X_p(t)$ )	Managing influence of <i>MIOPI</i> M on $IP_p$ in the process of its planning, formation, development, use, transformation in the intellectual and innovative cycle
Factor influence of the internal and external enterprise environment ( $f_i(t)$ )	Perturbing effect causing unplanned changes in the output value $X_{out}(t)$



**Figure 2:** Conceptual model for intelligent infrastructure of technological development at industrial enterprises:

- $X_{out}(t)$  is result of staff intellectualization management – output value in the form of a comprehensive assessment of economic parameters of intellectual staff potential;
- $X_{in}(t)$  is the specified team (input) effect on the management subject (reference parameters);
- $f_i(t)$  is factorial influence of the internal and external enterprise environment, causing unplanned changes in the output value  $X_{out}(t)$ ;
- $\Sigma X_p(t)$  is a managing (regulating) impact on the process of staff intellectualization;
- $\Delta X_{out}(t)$  is deviation  $X_{out}(t)$  from the reference parameters of management

#### 4. FUTURE RESEARCH DIRECTIONS

Further research stages of intellectual infrastructure for technological development of industrial enterprises suggest:

- clarification and specification of management functions within the infrastructure;
- development of organizational solutions for integration of intellectual infrastructure into the enterprise management system;
- formation of managing measures for the reproduction process of staff intellectualization;
- methodological preparation for the economic assessment of management results.

#### 5. CONCLUSION

In general, in the context of the globalization of the digital economy, a qualitative transformation of industrial enterprises at the organizational level is inevitable. The fact is that for the economy of active innovative transformations at the period of digitalization, it is essential not to reproduce copies of a typical product, but to develop and create qualitatively new types of goods and services. Thus, a popular approach to analyzing the activities of a modern industrial enterprise and making appropriate effective management decisions is not only considering the enterprise as a sum of tangible and intellectual resources, but also the increased importance and role of the latter in the activities of a modern enterprise.

#### ACKNOWLEDGMENT

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# OVERVIEW OF SURFACE WATER QUALITY MONITORING STATUS IN THE FRAME OF EU WATER FRAMEWORK DIRECTIVE REQUIREMENT IN SOME ALBANIAN RIVERS

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**Abstract:** *This paper first reviews the principal monitoring requirements of the WFD and discusses the monitoring network for diffuse pollution in Albania in the context of implementation of the EU Water Framework Directive (WFD). Considerations on water quality of surface waters from main Albanian rivers based on ecological and chemicals indicators are reported. Quality measurement are essential to demonstrate the comparability of obtained data and they form the basis for correct decisions related to management of water resources. The existing surface water quality monitoring network provides only restricted information to select between different management options when implementing river basin management plans (RBMP) under the WFD. We then clearly define and exemplify the roles, the functions and the need for a new set of monitoring tools support of implementing the WFD, using the case studies based on datasets that we obtained during recurrent monitoring campaigns in the Rivers Ishmi, Erzeni, Shkumbini and Mati.*

**Keywords:** *Water quality, EU Water Framework Directive, Monitoring acquis.*

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## 1. INTRODUCTION

The WFD requires that appropriate water quality monitoring networks are established and maintained (Directive 2000/60/EC, Annexes V, VI). Prior to establishing a monitoring network and programme the major surface waters have to be characterised as background for establishing at least good environmental status for surface water bodies or good quantitative and chemical status for ground water. The monitoring networks for surface waters should address:

- Flow measurements to monitor the quantitative status of the water body,
- Analysis of physical and chemical status of the water with respect to the quality objectives as determined by the specific category of classification of the water body,
- Analysis of ecological parameters in order to assess the ecological status and the ecological potential.

Monitoring systems include surveillance, operational, and investigative monitoring (Directive 2000/60/EC; Annexes V, VI):

- Surveillance monitoring shall be done to provide an overall assessment of the existing surface water and groundwater status and with the purpose to reveal the long-term developmental trends in water status.
- Operational monitoring is applied in water bodies at risk of not achieving good ecological status when a programme of measures has been implemented. The role of operational monitoring is to evaluate whether implemented measures are sufficient or whether additional measures are needed. As no programme of measures has been implemented so far within Albanian rivers no additional operational monitoring is needed. In the op-

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erational monitoring may include the meteorological monitoring and warning, as very important for the River Basin Management.

- Investigative monitoring is used to find out the reason why a water body does not fulfil requirements of good environmental status or in case monitoring data is missing to find out what the status of a water body actually is. There has not been established investigative monitoring programmes in rivers, lagoons or coastal waters at the moment in Albania.

The current water quality monitoring programmes in Albania are relatively extensive (NEA, 2015, 2016, 2017, 2018). These cover the main rivers (Drini, Mati, Ishmi, Erzeni, Shkumbini, Semani, Vjosa), the natural lakes of Ohrid, Prespa and Shkodra and include most of the polluted areas and environmental “hot spots”. The physic-chemical characteristics measured at selected monitoring stations by responsible authorities are confined to basic water quality and nutrient parameters with limited measurements of heavy metals, organics, priority substances and hazardous substances.

Available monitoring data and assessment criteria do not yet allow for a comprehensive assessment of the environmental state of water bodies. Generally, most of the rivers are polluted in their middle/lower reaches, largely due to the discharges of treated and untreated wastewater. This implies that those river sections will not comply with the WFD criteria for „good” status.

The purpose of this article is to provide an overview of the current situation of water monitoring in Albania, while identifying the issues and main shortcomings, and to propose a set of recommendations on how to improve the Albanian system meeting the EU requirements and standards.

## **2. METHODOLOGY**

This study is based on the desk research; reaching and collecting all existing information, studies, reports in relation to surface water quality monitoring. The assessment has been carried out considering the institutional monitoring arrangement as well in Albania and its respective periodical reporting on environmental status of water quality in Albania.

The study comprises the following phases:

- Emphasize the EU Water Framework Directive requirements related to monitoring system with particular focus to surface water quality monitoring,
- Collection of all existing studies, documents, technical reports, projects outputs, data series related to surface water quality assessment,
- Comparison of monitoring results and monitoring methods in compliance with EU Water Framework Directive monitoring requirements,
- Defining gaps and needs at the surface water quality monitoring system in Albania and provide the appropriate recommendations according to EU WFD.

## **3. RESULTS AND DISCUSSION**

The National Environmental Agency is the water monitoring authority in Albania; the NEA routinely monitors four times per year the basic physico-chemical parameters, heavy metals, organochlorine pesticides and polycyclic aromatic hydrocarbons in the main rivers of Albania at 34 sites. The network includes the basin of Drin, Mat, Erzen-Ishëm, Shkumbin, Seman, and Vjosa.

In 2019, the following parameters were sampled and analyzed four times per year (once per season): water temperature, pH, alkalinity, salinity, electric conductivity, dissolved oxygen, chemical oxygen demand (COD, dichromate method), biochemical oxygen demand (BOD<sub>5</sub>), nitrite (NO<sub>2</sub>), nitrate (NO<sub>3</sub>), total ammonium (NH<sub>4</sub>), total phosphorus (P<sub>total</sub>), orthophosphate (PO<sub>4</sub>) and suspended solids and transparency (lakes only). The NEA's laboratory is ISO accredited for the aforementioned parameters. They are significant parameters supporting biological quality elements, which, furthermore, can be linked with primary sources of pollution, such as discharges of untreated and treated wastewater. Table 1 provides the scheme for classification of the physico-chemical quality of rivers applied in Albania. The EU Water Framework Directive (WFD) priority substances and biological quality elements (benthic invertebrate fauna, phytoplankton, Phyto benthos, macrophytes and fish) are not yet routinely monitored.

Some of the Biological parameters are mainly monitored by universities; NEA has the necessary equipment and capacity to monitor the macroinvertebrates only. Until now NEA has carried out biological monitoring for Shkumbini River under the support of EU funded Project (EuropeAid/135700/DH/SER/AL; Keci E. 2015; Keci et al. 2020).

**Table 1:** Classification scheme for assessment of physico-chemical parameters in rivers

Parameters	Unit	Parameter limit values				
		High Status (I)	Good Status (II)	Moderate Status (III)	Poor Status (IV)	Bad Status (V)
Dissolved O <sub>2</sub>	mg/l	>7	>6	>5	>4	<3
BOD <sub>5</sub>	mg/l	< 2	< 3,5	< 7	< 18	> 18
pH (acid)			> 6,5	> 6		
pH (alkaline)			< 8,5	< 9		
NH <sub>4</sub>	mg/l	<0,05	<0,3	<0,6	<1,5	>1,5
NO <sub>2</sub>	mg/l	<0,01	<0,06	<0,12	<0,3	>0,3
NO <sub>3</sub>	mg/l	<0,8	<2	<4	<10	>10
PO <sub>4</sub>	mg/l	<0,05	<0,10	<0,2	0,5	>0,5
Total-P	mg/l	<0,1	<0,20	<0,4	<1	>1

**Source:** NEA, 2015, 2016, 2017, 2018

This classification – although distinguishing five classes, labelled from „high” to „bad” – is not yet designed fully in accordance with the requirements of the WFD.

Establishing schemes for the classification of ecological status requires many field data, which are currently not available.

Table 2 indicates that parts of the river basins did not meet the Albanian thresholds for „Good” status for physico-chemical parameters, notably in the lower reaches of the rivers.

### Shkumbini River

The available measurements data shows values that are below the border limits between moderate and good chemical status and there are no developmental trends indicating that the chemical status in the river system is deteriorating upstream the Rrogozhina monitoring station. Therefore, there are no indication that good chemical status in Shkumbini River cannot be achieved upstream the Rrogozhine monitoring station.

## Mati and Erzeni Rivers

Table 2 shows a good water quality for the monitoring stations of Mati and Erzeni Rivers. However, the monitoring parameters analyzed commonly in Albania are quite limited and not sufficient for the definition of quality ecological status of a water body.

## Ishmi River

The parameters taken into consideration in Table 2, even though limited, indicate a bad water quality in Ishmi River with high pollution in the monitoring stations.

**Table 2:** Water quality status in some of the Albanian Rivers

River	Monitoring Station	Average		
		BOD <sub>5</sub> (O <sub>2</sub> ) mg/l	NH <sub>4</sub> mg/l	Tot-P mg/l
Mati	Little Fani, Rresheni – in the Little Fani river at the bridge Rresheni-Gjegjani & Kukesi.	I	II	I
	Mati (Ma), Miloti – in Mati river (Miloti), at the new bridge Tirana-Shkodra (Berluskoni bridge in Shënkoll village).	I	II	I
	Mati (Ma), Klosi (Burreli) – in Mati river (Burreli), at the bridge connecting Klosi with Darse village	I	II	I
	Big Fani (Fa), Rresheni – In the Big Fani river, between the two bridges Miloti-Kukesi and Miloti-Rresheni.	I	II	I
Shkumbini	Shkumbini (Sh), Qukesi (Prrenjasi) – in Shkumbini river, at about 500 m upstream of Qukesi village	I	I	I
	Shkumbini (Sh), Librazhdi downstream – in Shkumbini river, at the railway bridge, about 4 km downstream Librazhdi, after the confluence with Rrapuni river.	II	I	I
	Shkumbini (Sh), Metalurgjiku (Elbasani) – in Shkumbini river, at about 6 km downstream Toplia Bridge at the southwestern part of the Elbasani Town.	II	I	II
	Shkumbini (Sh), Papri (Cerriku) – in Shkumbini river, at the Papri bridge in Shkumbini	II	II	I
	Shkumbini (Sh), Rrogozhina – in Shkumbini river, at the Rrogozhina bridge (the national road Kavaja-Lushnja).	III	II	I
Ishem	Lana/Rinas Bridge, rocky substrate with medium/low flow rate, bushy and grassy riparian vegetation; far from the inhabited areas	V	IV	V
	Zeze/FusheKruje, rocky substrate with medium/low flow rate; no vegetation; the station situated in an inhabited area surrounded by houses in both sides of the river.	V	IV	IV
	Gjuricaj, sludge/gravel substrate with medium flow rate; high, bushy and grassy riparian vegetation; the station is situated in an inhabited area close to the river delta.	V	V	V
Erzen	Pellumbas, rocky substrate with medium flow rate, bushy vegetation, situated 2km from Pellumbas village	I	II	I
	Beshiri Bridge, Ndroq, rocky/gravel substrate with medium flow rate; grassy vegetation; situated in the inhabited area	I	II	I
	Sollomone, Fshati Rinia, sludge/gravel substrate, with medium/low flow rate, high, bushy and grassy vegetation, situated within the inhabited area.	II	I	I

Source: NEA, 2018; Keci et al., 2020; Keci et al., 2018; EEA, 2008



In general, the monitoring of surface water quality in Albania is not performed in fully compliance with the Water Framework Directive. Assessment of ecological status is arguably the most complicated challenge for surface water monitoring programmes.

The preparation of the first generation of river basin management plans (RBMPs) – including characterization of surface water body types in accordance with Annex II of the WFD – is revealing that the following main aspects should be taken into account for improving the performance and fulfilling the gaps in water monitoring.

More than 34 monitoring sites will be needed for the preparation and implementation of RBMPs.

According to WFD (Article 5, Article 6, Annex II, Annex III), characterization of each river basin district has to be carried out in terms of pressures, impacts and economics of water uses. This process has not been done in fully compliance with the WFD, except for the rivers that has been gone through the preparation of River Basin Management Plans. Currently Mati River MP prepared through EU funded project drafted in 2011, needs to be updated. For Shkumbini River Basin has been drafted an Adaptation Plan to Clime changes, which is a good basis for a Management Plan. Erzen and Ishem River basins have not yet a Management Plan.

Inter-calibration of the ecological status classification systems for the above rivers has not been carried out according to Article 2 (22), Annex V of WFD.

The monitoring network prepared by NEA refers to a limited number of monitoring stations not based to the water body delineation. According to Water Framework Directive, each water body delineated should be periodically monitored.

Currently, only basic physico-chemical parameters are routinely monitored four times per year (once per season) – at 34 sites in 2019. Monitoring four times per year may not be sufficient for capturing the dynamics of river water quality and determining trends, notably for seasonally varying parameters; at least monthly sampling should prevail.

Parameters such as water temperature, dissolved oxygen, BOD<sub>5</sub>, NH<sub>4</sub>, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub> and P<sub>total</sub> although relevant as be linked with primary sources of pollution, such as discharges of untreated and treated wastewater, would need to be integrated with biological quality elements, such as benthic invertebrate fauna, phytoplankton, Phyto benthos, macrophytes and fish, which are not included in standard programmes of surveillance monitoring in rivers. Biological index values are to a higher degree indicator of seasonal trends in contrast to monitoring of chemical parameters which only expresses the instantaneous status in a water sample. In consequence monitoring of biological indices can justify less frequent and more relevant monitoring.

On the other hand, definition of ecological status requires minimum 5 years of successive monitoring of a water body. The monitoring in Albania appears to be fragmentary and not completed, mainly depending on the related projects that support the national monitoring, technically and financially.

As of early 2018, the NEA laboratory is having its equipment (atomic absorption spectrometer – AAS, and gas chromatograph/mass spectrometer – GC/MS) prepared and its methods under

accreditation for analysis of a selected number of WFD priority substances: heavy metals, organochlorine pesticides and polycyclic aromatic hydrocarbons. However, the analysis of priority substances is expensive, while the NEA already has difficulties financing water monitoring in the framework of the current monitoring programmes.

Challenging aspect of all three of the assessment approaches is the need to establish a benchmark, reference condition to anchor judgments of change (that needs to be used in the calculation of ecological quality ratios of observed and expected condition) (WFD, Annex 5, section 1.2). There is no methodology set and thus no reference conditions have been defined for any of the Albanian Rivers.

One weakness of the existing monitoring procedures is that the water flow is not monitored. For monitoring of hydrology and the quantitative status of water in rivers any measurements should be accompanied with sampling for monitoring of chemical parameters and vice versa. Hydrometric monitoring in combination with monitoring of chemical parameters will facilitate calculations of transport of chemical elements as background for making load estimates within sub-basins. At the same time misinterpretation of levels of concentrations of chemical components as a consequence of shifting water levels and flows and dilution effects may be avoided. Based on these assumptions hydrological surveillance monitoring is proposed to take place at the existing hydrometric monitoring stations simultaneously with sampling for measurements of chemical parameters.

## CONCLUSION

Assessment of ecological status is arguably the most complicated challenge of surface water monitoring programmes. Since Albania has to start from scratch, establishing WFD-compliant schemes for (type-specific) classification of the ecological status of surface water bodies requires substantial technical and financial support, an adequate and modern laboratory infrastructure, a fully functional monitoring network, as well as cooperation of all institutions responsible for water resources management, so as to eliminate overlapped responsibilities and reach the required transparency in both financial and technical terms.

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# PREVIOUS EXPERIENCES ON THE ESTABLISHMENT AND DEVELOPMENT OF THE EUROPEAN BANKING UNION

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**Abstract:** *The De Larosiére report initiating the establishment of the financial system of the European Union was published in the year following the global economic crisis of 2008, on 25 February 2009. Already in June of this year, the European Council accepted a document known as the Single Rulebook, which contains common rules related to the financial sector of the EU, however, the real break-through was achieved with the working paper accepted by the European Committee in December 2012, which initiated the establishment of the institutional system of the banking union. The individual elements of the system constituted by three pillars have been gradually developed, however, it is still not complete. The single banking supervising system started its operation in November 2014, the resolution mechanism in January 2016, however, the single deposit-guarantee system has not yet been established. The purpose of the study is to present the events of the recent 11 years, during which the currently known institutional system of the banking union was established.*

**Keywords:** *banking sector, banking union, development.*

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## 1. INTRODUCTION

Significant changes have taken place in the fields of banking regulation and banking supervision in the European Union since the financial crisis of 2008. The reforms of the recent 11 years are sufficient reasons to make a retrospection and to sum up what has been really implemented since the original concepts were developed, and what objectives are left to be still achieved by the EU for the safe operation of banks.

Changes have been realised partly through the reorganisation of the system of supervisory institutions affecting the operation of the banks, establishment of new institutions, and partly through the modification and tightening of EU regulations and guidelines. As part of the Economic and Monetary Union, the banking union supplements the work of the previous organisations. The individual elements of the system constituted by three pillars are intended to supervise the prudent operation partly of the euro zone, and partly of the banking systems of all member states to ensure that an event similar to the crisis of 2008 would cause the minimum damages to the financial system.

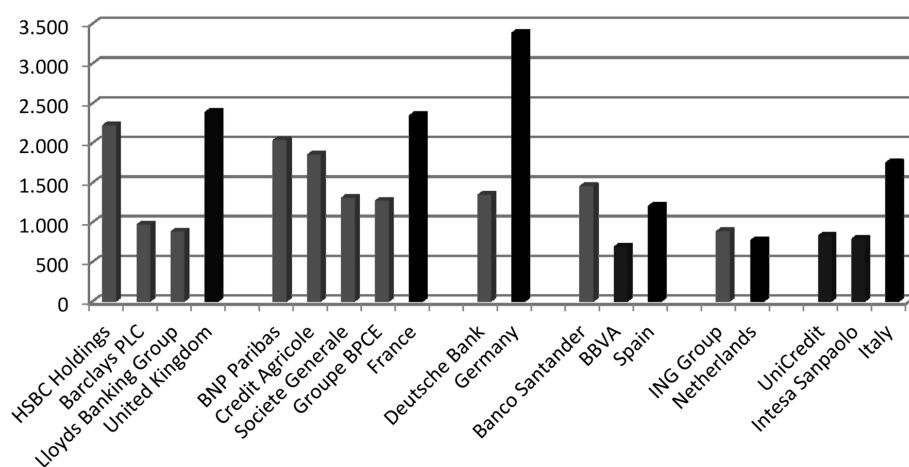
As a result of the technological development, the banks can more and more easily establish connections with the various financial operators. This has resulted in complicated financial mergers in the background, due to which the activities of the individual operators affect not only the operation of partners connected to them but also the economy as a whole. This process was one of the reasons as a result of which the crisis of 2008 became a world crisis. As a consequence of the phenomenon called by the literature as a contagion effect, the financial problems started in

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the banking system of the United States readily spread over the world. In addition to the connection between the partners and the complicated system of connections, the increase of the sizes of banks was also observed. Institutions with a vast number of assets were created, the sizes of which exceeded the economic influences of certain countries expressed in gross domestic products. Figure 1 shows the assets of the greatest banks of the European Union at the end of 2018, as compared to the GDPs of the countries in which they are based. Despite the tightened regulations, the sizes of these institutions have not reduced in the recent years. In Spain and the Netherlands, the assets of the greatest banks even exceed the GDPs of these countries, while the two values are almost identical in the United Kingdom and France. Though the United Kingdom exited the EU on 31 January 2020, the operation of its banking system will still significantly affect the financial system of the EU. In the top ten, the three greatest English banks are replaced with institutions such as the Italian UniCredit and Intesa Sanpaolo, and the Spanish BBVA.



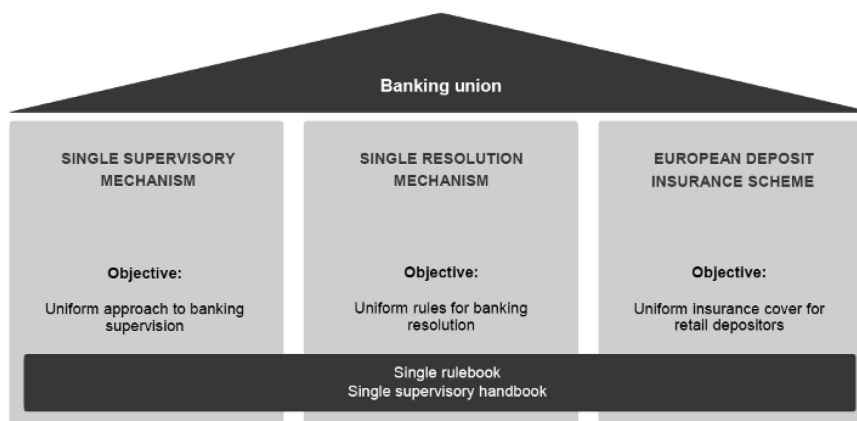
**Figure 1:** The balance sheet total of the greatest banks of the EU and the GDPs of the countries in which they are based

**Source:** Own edition on the basis of Cherowbrier (2020) and Clark (2020)

The financial institutions important from the aspect of this systemic risk still represent a significant economic power, the bankruptcy of which would induce another world economic crisis. According to the De Larosi re report published on 25 February 2009, stringent supervision and regulation of such institutions were one of the deficiencies of banking regulation before the crisis, and this is why it is necessary to adopt uniform rules for the banking system of the EU (De Larosi re, 2009). The report highlighted that the banking supervision previously had focused only on certain institutions (microprudential supervision), and this is why the supervision structure had to be reorganised. As a result, the macroprudential supervision of the EU was established with the assistance of the European Central Bank and the national central banks from 1 January 2011. As part of the European System of Financial Supervision, the European Systemic Risk Board performs the macroprudential tasks, while the European Bank Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority are responsible for the microprudential tasks.

In addition to the reorganisation of the system of institutions, the EU regulation and guidelines (CRD regulation, CRR guideline) on banking regulation were also updated on the basis of the Basel regulation (Sz eles et al., 2016). The rules focus on the tightening of capital rules, reducing excessive risk-taking by the banks, and the requirements demanding increased capital give priority to safe operation.

After the crisis, the EU became committed to make its banking system more resistant to the negative economic events. The crisis affecting the whole world has shown that the countries are not able to individually manage the problems, and a comprehensive solution is necessary. Interconnection between the financial operators within the member states of the euro zone is particularly true due to the common currency, and therefore a more stringent supervision of such institutions is necessary. In September 2012, the European Commission announced the importance of the creation of a banking union in a communication, and in December 2012, report “Towards a genuine Economic and Monetary Union” was adopted, which contained already actual proposals in connection with the implementation of the banking union. Based on this, the uniform regulatory package on the banking system of the European Union was divided into three pillars, i.e. the uniform banking supervision mechanism, the single resolution mechanism, and the single deposit guarantee system.



**Figure 2:** Pillars of the Banking Union

**Source:** European Banking Federation

<https://www.ebf.eu/priorities/banking-supervision/banking-union/>

The Single Rulebook serving as a basis for the banking union was released already in 2009, and was intended to eliminate the regulatory differences to ensure that identical requirements are set for the member states, and thereby the operation of the bank system becomes more transparent (EBA). The rulebook created with the assistance of the European Bank Authority (EBA) contains rules on capital requirements, protection of depositors and prevention of crisis, which are valid for nearly 8,300 banks of the EU. The common banking supervision within the bank union currently applies to 19 member states of the euro zone, however, other member states may also apply for admission.

Already at the beginning, it was clear that the deadlines specified for the introduction of the banking union could not be met, they tried to urge decision-makers, and this was confirmed also in practice. There follows a description of how the individual elements of the banking union have changed after the initial concepts, and which measures have been effectively implemented in order to protect the banking system and the economy.

## 2. SINGLE SUPERVISORY MECHANISM (SSM)

Decision-makers gave priority to the establishment of the banking supervision considered as the basis and core element of the system, and therefore first the banking supervision mechanism started its operation under the aegis of the European Central Bank on 4 November 2014.

To have an accurate picture of the status of the banks of the EU, the ECB examined the quality of their assets and their level of resilience to crisis via stress tests for one favourable and one unfavourable economic event. In cooperation with the ECB, the European Bank Authority tests the resilience of the banks every two years, considering the performance not only of the big banks of the euro zone, but also of those of the other member states of the EU. Based on the data, 87 controlled banks proved to be more resilient against economic shocks in 2018 as compared to the results of the test of 2016. The rate of the Common Equity Tier 1 (CET1) considered as the key capital element of banks increased from 8.8% to 10.1% within all assets (ECB, 2019).

The ECB supervises those banks of the euro zone member states:

- which possess assets with a value above euro 30 billion,
- the value of the assets of the bank exceeds 20% of the GDP of the country where it is based,
- they operate in at least two countries, and have significant external exposures.

If none of the conditions is met (e.g. Slovakia, Lithuania), the first three credit institutions with the highest values of assets are controlled. Since the beginning of the operation of the SSM in 2014, on 1 January 2015 Lithuania became the 19th member state of the euro zone, and thereby its first three big banks automatically come under control of the banking supervision system of the EU. Based on the list published by the European Central Bank, 117 banks of the euro zone were under direct control of the SSM on 1 January 2020. These institutions possess more than 80% of the bank assets of the euro zone (ECB, 2020).

On the basis of the experiences of the period since its beginning in 2016, the Council initiated the modification of the rules of the banking union, based on which the capital requirements were tightened. As a result, the capital reserves of the banks have increased in the recent years, and their compliance with the short- and long-term liquidity requirements has made the operation of the institutions safer. In general, the uniform banking supervision performs the banking supervisory work previously belonging to the national scope and performed by central banks in the member states concerned, but it still closely cooperates with them.

### **3. SINGLE RESOLUTION MECHANISM (SRM)**

Resolution is an activity performed to restore the operation a financial institution that becomes or has become insolvent, with the main purpose to preserve economic stability. After the crisis, the member states spent significant amounts to save failed banks to avoid an even deeper recession of their economy. As a result, the state debts of the countries increased, the consequences of which are still seen in Island, Ireland and Spain. A common EU fund was established to avoid the use of the money of taxpayers for the bail-in of banks.

In July 2014, Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms was adopted, based on which national resolution funds are created in the member states. In the process of the resolution, first the national authority indicates if a bank has become or is becoming insolvent, and in cooperation with the resolution body they jointly make a decision on the necessary measures. The means of resolution include the sale of assets, use of a bridge institution or recapitalisation by creditors. If these are not sufficient, then the assets of the single resolution fund are used. The fund is filled up from the payments of all member states during an eight-year period until the end of 2025, its scheduled amount is euro 55 billion, which will be foreseeably 1% of the guaranteed deposits.



The single resolution authority started its operation on 1 January 2016. Its purpose is to avoid the bankruptcy of the banks by using the resolution means, and to ensure their further operation with reorganisation without the depositors feeling the problem.

In 2017, the previous directive (2017/2399/EU) was modified, it requires the global systematically important banks to have sufficient resources and general loss protection (Total Loss-Absorbing Capacity, TLAC) to ensure their resolution in the case of bankruptcy.

Resolution has already taken place in one case. Via the resolution of the Cooperative Bank of Peloponnese, the further recession of the Greek economy already in difficulty could be avoided.

#### **4. EUROPEAN DEPOSIT INSURANCE SCHEME (EDIS)**

The deposit guarantee is intended to compensate the depositors of the insolvent institution, if the resolution of the institution is not possible any more, and its liquidation is unavoidable.

Directive 2014/49/EU of the Council was adopted on the uniform deposit guarantee in 2014, in which the creation of a common fund was also specified. The International Association of Deposit Insurers (IADI) and the European Forum of Deposit Insurers (EFDI) have contributed to the establishment of a single deposit guarantee system with their work. The directive provides that at least one deposit guarantee scheme must be operated in each member-state, which can guarantee the protection of the depositors in case of bankruptcy. Payments into the funds must be affected in advance (ex ante), on the basis of the banks' risk-based fee payment. The purpose is to ensure that the coverage index of the national funds reaches 0.8% of the guaranteed deposits by 2024. The guarantee limit is euro 100,000 in each member state from 2011. The period available for compensation must be gradually reduced from the previous 20 days (to 15 days from 2019, to 10 days from 2020, and to 7 days from 2024).

The member states were able to implement the above requirements partly already in practice; however, a single fund is still to be established. In the sense of Article 19(5) of the directive, the Commission must give a recommendation on the organisation of the single EU deposit guarantee fund by 3 July 2019. Unfortunately, the establishment of the system is hindered by the differences between the deposit guarantee systems of the member states (more than one funds operate in certain countries), and the conflict between the northern and southern member states. Some western countries fear that they have to fund a potential bankruptcy of the banks of South-European countries having recessed economies. The review of the directive has been started, but currently it is not accepted between the member states. According to the idea, a single deposit guarantee would represent an extra safety net behind the deposit guarantee systems of the member states, which offers help to the national deposit guarantors for the payment of the injured parties if necessary. Hopefully, the way of its implementation in practice and the time when the different viewpoints of the member states will approach each other will become clear in the near future.

#### **CONCLUSION**

In general, we can state that all regulatory and systemic reorganisations related to the banking system of the EU were intended to ensure safer operation of the banking system, to eliminate the so-called vicious circle, which caused the deepening of the crisis.

*“The reform of the regulation has achieved its aims from several aspects, while its true efficiency and practical implementation are doubtful in other fields. Coordination and simplification of the extremely complex regulation and provision of its competition-neutral nature serve the basic interests of both the banking sector and of the general public.”* (Móra, 2019)

The supervision and resolution mechanism of the banking union has a key role in the prevention of any crisis, while the single deposit guarantee is in place when the bankruptcy of the failed institution is unavoidable. According to the current status, the system tried to get prepared for the management of a negative situation caused by another economic shock, however, its functioning in the case of a severe problem is doubtful. According to certain forecasts, Europe may face a severe crisis in the near future, which may even worse than that in 2008. Its signs may appear in the slow-down of the European economy and further recession in the South-European countries, mainly in Italy.

The future task and challenge for the European Union will be to further control the EU banking supervision and resolution activities and to establish a single deposit guarantee system in order to implement a single monetary union.

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# EMPIRICAL ANALYSIS OF REGIONAL DISPARITIES IN INCOME INEQUALITY

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**Abstract:** *In this paper are presented selected results from an empirical analysis of the income inequality in Bulgarian regions. As we know from the economic theory the income that people receive is a basic measure of living standards. Which from your end is related with the risk of poverty or social exclusion? Disparities of the regions is an actual question which is investigated by many researchers. The current research is investigating inequality and related indicators.*

**Keywords:** *Cluster analysis, Comparative analysis, Income inequality, Bulgarian region, Indicators of inequality.*

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## 1. INTRODUCTION

In the last decade we have followed the rise in the technology and development of human capital. As a consequence, there is an increase in the incomes and well-being of humanity. At the same time, there is an increase in income inequality in some countries.

„The relation between economic growth and income inequality is very complex.”<sup>2</sup> According to Gyorgy Andor in the countries of Central and Eastern Europe, the transition process and EU cohesion occur simultaneously with the overall effects of globalization, which in turn influences the development of inequality in these countries.

Bulgaria is one of those countries that has a negative trend in income distribution, especially in terms of population distribution by region. The problem of regional economic development is increasing in the country. The indicator reflecting the economic development in the country, Gross Domestic Product is indicative of the huge differences between the regions. The gap between the individual districts in Bulgaria is not only related to economic indicators, but also to social ones.

„Political and ideological differences generally make reaching a consensus on how to address inequality of outcomes such as income extremely difficult.”<sup>3</sup> The study of income inequality is one of the challenges of contemporary economic research. Fundamental to the measurement of inequality is the principle of equal opportunity for John Romer in 1993 and 1998.

In 2013 Stoyan Hristov<sup>4</sup> analyzes inequality in Bulgaria, reflecting the dynamics and looking for the causes of the profound differences in Bulgaria. In 2013 Stoyan Hristov analyzed inequal-

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<sup>2</sup> Gyorgy Andor, INEQUALITY PROBLEMS IN CENTRAL AND EASTERN EUROPE, Fourth international scientific conference ERAZ 2018

<sup>3</sup> Ana Abras\*, Alejandro Hoyos, Ambar Narayan and Sailesh Tiwari, Abras, „Inequality of opportunities in the labor market: evidence from life in transition surveys in Europe and Central Asia”, al. IZA Journal of Labor & Development 2013, 2:7

<sup>4</sup> Стоян Христов, „Неравенството в България динамика, сравнителен анализ и причини”, Институт за пазарна икономика.

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ity in Bulgaria, reflecting the dynamics and looking for the causes of the profound differences in Bulgaria, also examining income inequality, using basic coefficients and indicators reflecting income distribution problems.

## 2. INFORMATION BASIS OF THE STUDY

In this study, the main indicators used in field work are based on the inequality measures used in theory. Data on the variables in this survey by region for the period 2008-2018 are provided on the website of the National Statistical Institute (NSI).

- The first indicator which is used at the current study is *Gini's coefficient*<sup>5</sup> by planning regions in the period 2008-2018. It is one of the main coefficients used in the analysis of income inequality. „It is often used as a gauge of economic inequality, measuring income distribution or, less commonly, wealth distribution among a population.”<sup>6</sup>;
- The second indicator which is present in the report is *Population at risk of poverty or social exclusion (% of population)* by regions in the period 2008-2018. (% of the total);
- The next variable used for present economic inequality is *Percentage of population living with material deprivation* by regions in the period 2008-2018. (% of the total).

## 3. ANALYSIS OF REGIONAL DISPARITIES IN INCOME INEQUALITY IN BULGARIA DURING THE PERIOD 2008-2018

The imbalances in the regions of the country in terms of income inequality could be mainly represented by the following indicators.

- The main indicator of inequality considered by economic theory is *the Gini's index*. The coefficient measures the extent to which income redistribution or consumption expenditure in the economy diverts from perfect (equal) distribution.<sup>7</sup> In table 1 are presented the regions of planning with maximal and minimal values of Gini's index during the period 2008 - 2018.

**Table 1.** Regions with maximal and minimal values of Gini's index

	<b>Maximal</b>	<b>Minimal</b>
<b>2008</b>	Northwest	Southwestern
<b>2009</b>	Northwest	Southwestern
<b>2010</b>	Southeast	Southwestern
<b>2011</b>	Northwest	South central
<b>2012</b>	Southeast	South central
<b>2013</b>	Southwestern	North Central
<b>2014</b>	Southeast	North Central
<b>2015</b>	Northeast	North Central
<b>2016</b>	Northeast; Southwestern	North Central
<b>2017</b>	Southwestern	North Central
<b>2018</b>	Southwestern	Southeast

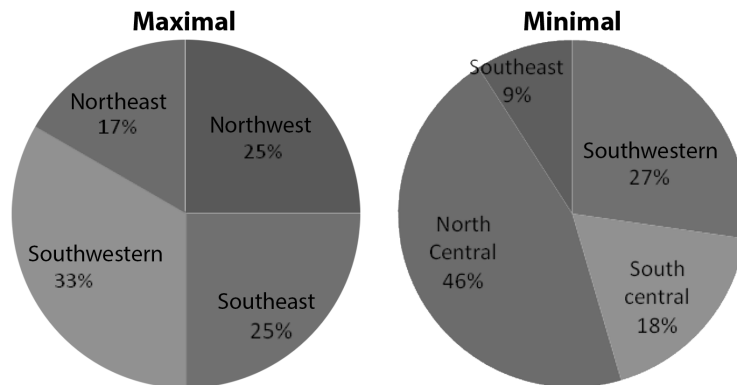
<sup>5</sup> World Bank – Gini Index - Italian statistician and sociologist Corrado Gini 1912

<sup>6</sup> Investopedia - <https://www.investopedia.com/terms/g/gini-index.asp>

<sup>7</sup> World Bank, Gini Ratio Definition, as interpreted by „Неравенството в България динамика, сравнителен анализ и причини”, Стоян Христов, Институт за пазарна икономика.

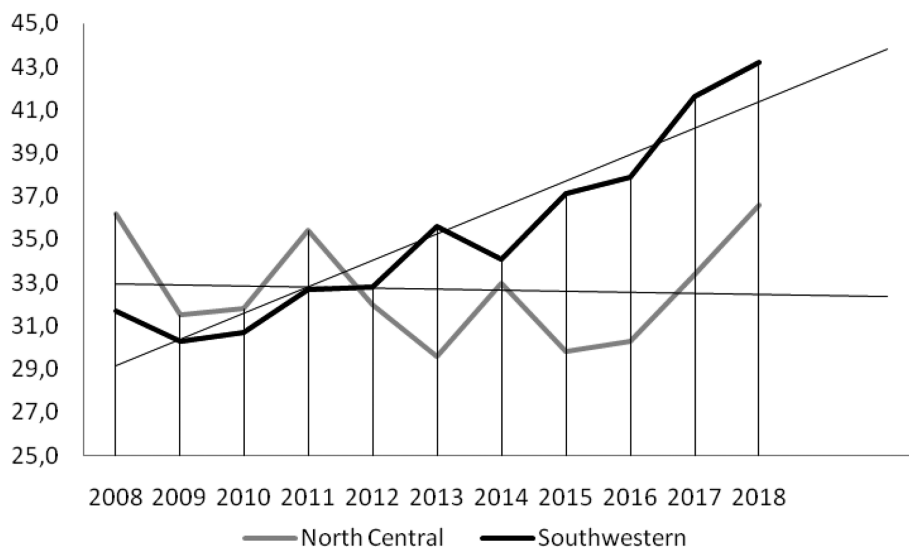
The table 1 shows the regions with the maximum and the regions with the minimum values of the Gini's coefficient. In 2008 and 2009, the highest levels of inequality in Northwest and the lowest levels of inequality in Southwestern as Southwestern continued to maintain the lowest coefficient values in 2010.

While the highest values are in the Southeast. During the period 2011-2018 maximal levels of inequality support again Northwest in 2011, Southeast for 2012 and 2014, Northeast for 2016 and Southwestern which has highest level of inequality except for 2016, 2017 and 2018, the last years of the investigated period.



**Figure 1** Regions with maximal and minimal values of Gini's index for whole period 2008-2018

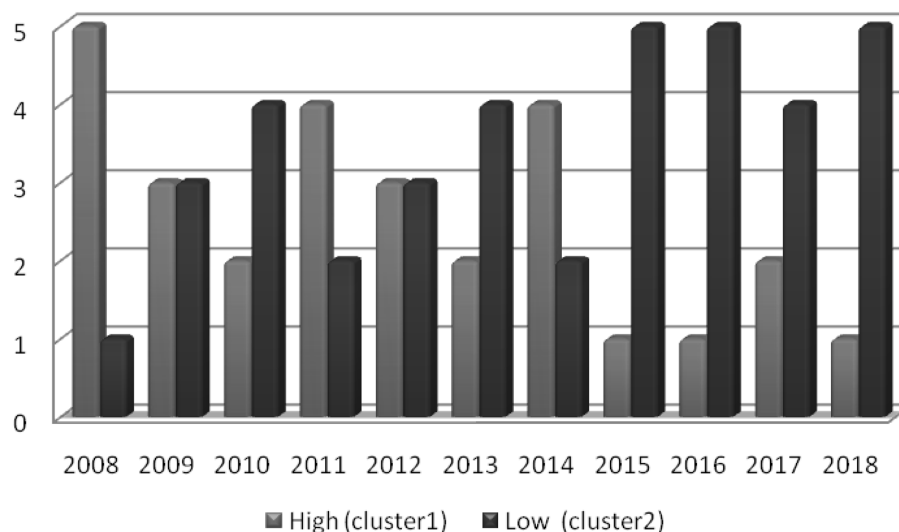
As Figure 1 indicates, during the investigated period maximal levels of Gini's index is observed in the region Southwestern. As in the last years to this region income inequality is the highest compared to other regions. The regions South Central and North Central did not maintain the highest levels of the index in any year of the study period. Even, region of North Central during the biggest part (46% from the investigated period) there were minimal levels of income inequality. This is the region with the smallest imbalance. It is the median of minimal values of the index for the regions. The median, as we can see, of the region's biggest imbalance concerning inequality in income is the Southwestern. According to Gini's index in Bulgarian regions are observed disparities in income inequality.



**Figure 2.** Gini's index for North Central and Southwestern during the period 2008-2018

In Figure 2 is presented the Gini's index for North Central and Southwestern during the investigated period 2008-2018. North Central is with the index which is the most common minimum, while Southwestern is median for maximal levels of the values of the coefficient. In the period from 2008 to 2012 the index in Southwestern there were values smaller than the values in North Central but in 2012 year there was an observed intersection of curves. The opposite trend can be traced after 2012 to 2018 as the values of index. The trend line for North Central – there is decreasing trend and the index, there are the smallest values of income inequality, while the trend line for Southwestern shows sharp increase in income inequality.

In order to structure and summarize the Gini's coefficient data, a cluster analysis was conducted. In order to distinguish between the number of regions with high coefficients and the number of regions with low index values, 2 cluster groups were predefined in the analysis. In the *first cluster group* are concentrated regions with high coefficient values, respectively, in which high income inequality is observed. The *second cluster group* concentrates in itself, regions with low indicators or with low income inequality. Clustering was done for each year of the study period individually to see if there were any imbalances between the studied regions in the investigated time series. Figure 3 summarizes the information from the cluster analysis performed.



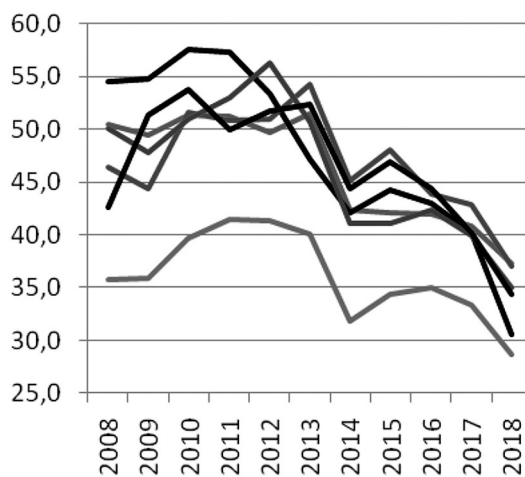
**Figure 3** Results from a regional cluster of analyzes over the period 2008-2018

If we follow, in Figure3, the line of pillars that reflect high levels of the Gini's index, we will see that during the first part of the period they are higher. Whereas in recent years the number of regions falling into this cluster is smaller. This shows a positive downward trend in the number of regions with high levels of income inequality. Respectively, the pillars reflecting the number of regions falling into the cluster with low index levels are increasing. This confirms the positive trend of increasing the number of regions falling into the cluster with low levels of inequality.

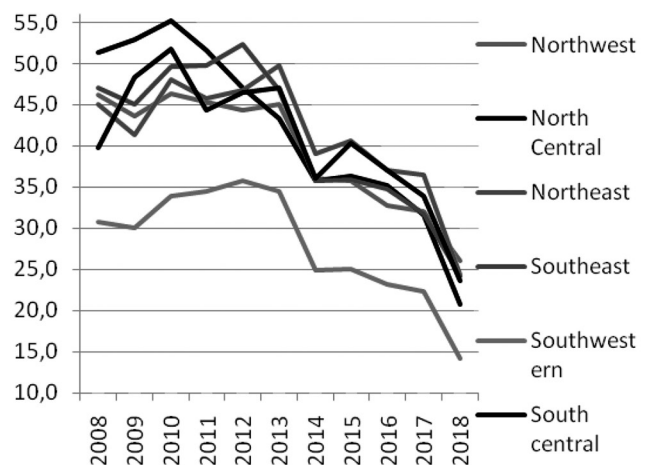
Figure 3 indicates that during the investigated period is observed disparities in the part of Bulgarian regions because in the timeline, we can see that the number of regions in the two clusters is constantly changing and this indicates an imbalance in the planning regions in terms of income inequality. We can follow 3 from the regions which have no significant disparities in the cluster to which they belong. The region North Central in 91% from the investigated period is included to Cluster 1 (High level of the index). The regions Southeast and Southwestern in 82% from the period are included in Cluster 2 and they maintain some of the lowest levels of income inequality.

From the other side the arithmetic mean (average) for the 6<sup>th</sup> regions for 2008 of the Gini's index is 35.9%, but for 2018 is 36.9%. This shows that there is 10% growth from the beginning to the end of the period. So, it should be noted that the coefficient must be reached in Cluster 1 at the beginning of the period cannot be collected as at the end of the period. Thus, the cluster analysis testifies only to the *imbalance between regions regarding income inequality* due to the constant change in the number of regions falling within the two clusters.

Both of the indicators which present the poverty, which is invariably linked to income inequality, are Population at risk of poverty or social exclusion and Percentage of population living with material deprivation. They are presented in the below Figures 4 and 5.



**Figure 4.** Population at risk of poverty or social exclusion



**Figure 5** Percentage of population living with material deprivation

Figures 4 and 5 indicate that both coefficients show approximately equal percentages so we can see that the region Southwestern is with the low levels of the both coefficients which present the poverty. When comparing and with Gini's index in Figures 1 and 2 it can be concluded that the region with the lowest value according to poverty is the most common region with the highest values for income inequality. The region North Central in Figures 1 and 2 is with lowest values for the Gini's index. This dependence needs to be more thoroughly examined with statistical methods based on correlation relationships.

#### 4. CONCLUSION

The regional disparities in income inequality are a specific topic that is most commonly explored in theory through the Gini Index. The inequality „has a fairly complex and nuanced structure”.<sup>8</sup>

In this empirical study, through comparative analysis and cluster analysis, the existence of imbalance between the different planning regions in Bulgaria in terms of income inequality in the period 2008-2018 was found. Most of the Bulgarian regions have significant differences in terms of income.

<sup>8</sup> Aghion, P., Caroli, E., & Garcia-Penalosa, C., 1999. Inequality and economic growth: the perspective of the new growth theories. *Journal of Economic literature*, 37(4), 1615-1660.

The report established that Southwestern region is with the lowest levels of the both coefficients which present the poverty, at the same time, it is the most common region with the highest values for income inequality. Inverse relationship was found for North Central region, too, but with the highest values of the both coefficients it showed the poverty with the lowest values for the Gini's index. This relation must be clarified by precise statistical measures. Since this assertion is based solely on comparative analysis it is not sufficient to confirm the information.

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# THE MANAGEMENT ORGAN IN THE ARCHITECTURE OF THE EUROPEAN STRUCTURES FOR BUSINESS ASSOCIATION

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**Abstract:** Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE) and Council Regulation (EC) No 1435/2003 of 22 July 2003 on the Statute for a European Cooperative Society (SCE), as well as other community acts, govern the legal status of the management organ with two-tier architecture of European structures for business association.

*In this paper, it is concluded that the management organ shall be responsible for managing the appropriate organizational and legal entities. Therefore, it can carry out day-to-day management of the organization according to the decisions of the general assembly and the supervisory authority. It is stated that assigning day-to-day operational management to the CEOs, members of the management organ, can be defined as transferring certain aspects of their power, while keeping their right of making final decisions.*

*The collective character of the considered authority, carrying out its duties on the principle of collegiality, raises a line of questions, which are considered in this paper.*

*Subjects of study are also the horizontal and vertical relationships of the management organ, considering the representative power, as well as the different types of responsibilities. The discussed problems are in a relatively legal aspect of the legal regulations of the Member States.*

**Keywords:** European Cooperative Society, European Company, management organ, administrative organ, managing director.

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## 1. INTRODUCTION

The regulatory framework of the management organ in the architecture of European structures of business associations at the Council level is designed by the following successively adopted legal acts: Council Regulation (EEC) No 2137/85 of 25 July 1985 on the European Economic Interest Grouping (EEIG), Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE) and Council Directive 2001/86/EC of 8 October 2001 supplementing the Statute for a European company with regard to the involvement of employees, as well as Council Regulation (EC) No 1435/2003 of 22 July 2003 on the Statute for a European Cooperative Society (SCE) and Council Directive 2003/72/EC of 22 July 2003 supplementing the Statute for a European Cooperative Society with regard to the involvement of employees. In many cases, those acts are referred to national legislations. That is why the legal regulation of the formation, functioning and winding up, liquidation, insolvency and cessation of payments are of a hybrid type.

## 2. LEGAL CHARACTERISTICS OF MANAGEMENT BODIES

The established regulatory legal framework for the European Economic Interest Grouping (EEIG) is specific. The organs of the grouping shall be the members and the manager or managers acting collectively. The grouping shall be managed by one or more individuals appointed

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in the contract for the formation of the grouping or by a decision of the members. No person may be a manager of a grouping, may belong to the administrative or management body of a company, may manage an undertaking or may act as a manager of the European Economic Interest Grouping:

- a) by virtue of the law applicable to the individual, or
- b) by virtue of the national law of the state in which the grouping is based, or
- c) by virtue of a judicial or administrative decision made or recognized in a member state.

In the case of groupings registered in a member state, the state may provide that legal entities may be managers under the condition that such a legal entity represent one or more individuals. If a member state exercises this option, it must provide that the representative or representatives shall be liable as if they were themselves managers of the groupings concerned.

The legal position of the management teams in the other two European corporate entities is different. These governing bodies are named differently depending on the form adopted in the statutes. In a European company [1] this is the management organ (two-tier system) or the administrative organ (one-tier system). In the European Cooperative Society [2] these are the management organ (two-tier system) or the administrative organ (one-tier system). These management units have a number of structurally defined identical commonalities. However, they have different legal characteristics.

The administrative organ at the one-tier system has a broader competence than the management organ in the two-tier system. The manner of their formation and constitution is also different. [3] The member or members of the administrative organ shall be appointed by the General meeting. The members of the administrative organ at the time of its foundation may, however, be appointed by the statute. The staff of the management organ is formed by the supervisory organ. This supervisory organ may make changes to it at any time, including such for expediency reasons when appropriate. The administrative organ in one-tier system has a wider range of powers compared to the former one.

The administrative organ at a one-tier system and the management organ in a two-tier system are executive and representative bodies of the company. [4] The supervisory organ may not by itself exercise the power to manage the grouping (art. 40 - 1). Council Regulation (EC) No 2157/2001 states *expressis verbis* that “the management organ shall be responsible for managing the SE”. Similar is the provision of Council Regulation (EC) No 1435/2003 stating that “the management organ shall be responsible for managing the SCE” (art.39 – 1), and “to discuss the progress and the foreseeable development of the SE’s business.” (art. 44 - 1) This jurisdiction affects all areas of the company’s activities. [5] With a view to the effective implementation of the established *ex lege* function, it is explicitly defined that the body meets periodically. The approach to determining the place of the administrative organ in the structure of the company is identical (art. 29 -1).

The management and the administrative organ have different names in the official languages of each member state depending on their historical legal tradition.

The administrative organ at one-tier system and the management organ at the two-tier system may delegate the day-to-day management and representation of the company to the CEO or CEOs under the same conditions as for the same companies established [6] in the Member

States. These executive council members have the legal status of legal representatives and possess a specific legal standing [7].

The members of the administrative organ at one-tier system are elected by the General meeting of the shareholders. This is an exclusive authority and it cannot be delegated. However, the members of the firstly constituted management organ after the startup of the company may be appointed by Statute (art. 43 – 3). In line with the Latin provision *Nulla regula sine exceptione* there is an exception to the established rule stating that the Regulation does not affect the operation of a national rule that allows the minority shareholders or other persons and authorities to elect some of the members of the body concerned (art. 47 - 4). This rule applies irrespective of the conditions for employed participation in the management of the company as defined in Council Directive 2001/86/EC and Council Directive 2003/72/EC.

The collective structure of the body, the prompt implementation of the necessary management actions and the need for highly specialized professional qualifications have made it possible for a member state, which is established in accordance with the national law [8], to appoint an Executive director or Executive directors to be responsible for the day-to-day management under the same conditions as the relevant companies with a registered office on the territory of that country [9]. Therefore, it is a matter of forming an operational management that performs planning, organizing, leading, coordinating and controlling functions for the efficient running of the company's activity [10]. This possibility is one of the main similarities of the one-tier management system and the two-tier structure.

The option to appoint executive members of the management organ (two-tier system) or the administrative organ (one-tier system) was accepted by Belgium, Bulgaria, Greece, Denmark, Estonia, Spain, Latvia, Luxembourg, Poland, Slovenia, Hungary, Finland, France, Croatia, Czech Republic and Sweden. The Commerce Act in Bulgaria (art. 224 - 4) enables an administrative body, respectively a management body of companies based in the country, to delegate the management of the company to one or more executive directors selected from among its members and to settle their remuneration. It also establishes the restriction stating that the number of executive members may not be greater than the number of the other members. A similar regime is established in Code de commerce de France. It envisages that each of the aforementioned bodies can elect a CEO and their deputies (art. L 225-51-1). Some conditions for this choice are formulated: he or she must be an individual (art. L. 225-51-2); one individual shall not perform the function of CEO or their deputy for more than one term when the company's headquarters is based in France (art. L. 225-51-6), etc.

The Corporate Governance Code, June 2010 - A.2 of Great Britain states that the two bodies may appoint a CEO and CEOs. The members of the non-executive bodies should assist in the implementation of the strategy adopted by the company and ensure that its tactical objectives are achieved. The CEO shall not be Chairman of the governance body. If the organ decides that it is necessary for it to perform both functions simultaneously, a consensus of the majority of the shareholders shall be reached (A.3.1).

It is also apparent from the name that the executive members of the bodies concerned carry out enforcement activities, i.e., perform the day-to-day management of the company according to the decisions of the General meeting [11]. It is an integral component of the overall management of the European company (EC).

The activities of the executive members are regulated by law. A new legal relationship is emerging between the CEO or the CEOs on the one hand, and the company, on the other. The generated legal fact is complex and involves two actions: either choosing from the management organ (two-tier system) or the administrative organ (one-tier system) with the agreement of the corresponding person. The election of the General Meeting will proceed according to its approved working rules. Only individuals holding the status of „shareholder” or „cooperator” [12] can participate in it. Therefore, the individuals who have handed over cash or other substitutable property under concluded loan agreements (creditors) to the company, as well as the real estate lenders etc., cannot vote.

After their election the executive members acquire a new legal status. A new twofold legal situation arises. On the one hand, they are members of the management or the administrative body, and on the other they are assigned and perform specific management functions. A new management legal relationship is emerging between the managing authority and the elected members. The created relationship is not independent. Legally it is inextricably linked to the legal relationship that has arisen before. Therefore, it is subsidiary (accessory) in nature. In case when an executive member of the board terminates their participation in the executive management due to voluntary resignation, only the executive relation will be abolished, but the existing legal membership relation will remain in force. The executive relationship will also terminate upon its unilateral termination by the above-mentioned authorities, which may take place at any time. In this sense, the dismissal of the Executive Director from that capacity will be, on the one hand, an extinguishing legal fact with respect to the executive legal relationship and, on the other, a changing legal event for their membership.

The assignment of the operational management of the executive directors can be understood as delegation of certain powers to them by the two bodies, while maintaining their right of control. This is not about delegating competence. Rather, we are faced with a division of organizational and subject-matter responsibilities. This is also evidenced by the fact that the members of the bodies with executive and non-executive functions have the same rights and obligations, regardless of the internal distribution of functions (Art. 237 - Commerce Act of Bulgaria, art.234; Code de Commerce of Belgium, etc.)

The relationship created shares some common features with the “management organ - supervisory organ” attitude in the company’s two-tier management model. There are also some significant differences. The executive directors are appointed by the management body and they retain their core legal capacity as members of the management body, while the members of the supervisory body cannot be both members of the supervisory body and the management body of the same company.

The election of an executive member of the management or the administrative body does not make them a new body in the management structure of the company.

From a legal viewpoint, the managerial legal relationship, in addition to the original one, has similar features to the mandated legal relationship [13].

In cases where member states have not accepted this option such as Austria, Germany, Cyprus, the Netherlands, the United Kingdom, etc., the management is exercised collectively by the management body, respectively by the administrative body. That is why both of them are holders of collective responsibility.

The two bodies are constituted by the election of Chairman from among the company's members. Where one-half of the members are selected by the employees in application of the above-mentioned directives, only one person nominated by the General meeting of the shareholders or cooperators may be elected Chairman.

As a collective legal and organizational entity, the management organ or the administrative organ operates on the principle of collegiality. The regulations do not establish a required quorum and a required majority for a legitimate adoption of their acts. The regulation of this issue has been provided by the company's Statute. However, there is a requirement for the frequency of its meetings on a community level.

The management organ must meet at least once every three months at intervals specified in the Statute of the association (art. 44 - 1). This means that it should be assembled at least four times during the calendar year. The requirement is legally and economically justified, as the body in question manages the company. The meetings may be regular or emergency and the procedure for summoning them is regulated in the Statute. With a view to the effective participation of the members of the body in its meetings, their right to an access to the complete information on the issues discussed on the agenda as well as to the general activity of the company, have been legally granted [14].

Generally, the number of members of the management and/or the administrative organ and the rules for determining it are laid down in the Statutes. However, there is a possibility for a member state to set a minimum and, where necessary, a maximum number of members. Denmark, Estonia, Latvia, Slovakia, Slovenia and Sweden have accepted a minimum of three members; in the United Kingdom they are two, and in Poland - five. Other countries have established a minimum and maximum number: Bulgaria - three and nine; Germany - three and nine (15 and 21); Hungary - five and eleven; Finland - one and five; France three and eighteen etc. However, despite the autonomy granted to the company the Council Regulation (EC) No 2157/2001 stipulates that the management organ is composed of at least three members and the participation of employees in the management body is regulated in accordance with the supplementary Council Directive 2001/86 / EC with regard to the involvement of employees.

In order to actively involve the employees in the management of the company an appropriate number of their representatives in the management body is normatively determined in a number of cases. The Swedish legislation stipulates that for staff over 25 people, two representatives from the meetings of employees of the company should be included in the body, and for more than 1000 people they are three. Similar requirements are also available in the German legislation providing for broad participation of employees in management [15].

### 3. CONCLUSION

The governing bodies in the transnational entities under consideration play an important role in the process of enlarging and enriching the institutionalized European economic partnership. They contribute to the sustainable and intelligent economic development of these structures, to a more pragmatic and long-term approach in the planning of their activities, to acceleration of the integration processes between the member states and to completion of the common internal market. Based on *facta concludentia* and corporate democracy, they are refining their operational activities with a view to achieving optimal economic, technological, social and organizational results.

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# CHALLENGES TO THE TAXATION OF THE DIGITAL ECONOMY

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**Abstract:** *Globalization and digitalization have led to the emergence of new business models based on the remote provision of services. Digital companies have access to consumers in countries all over the world without physical presence in these countries. As a result, their profits remain untaxed. There is an increasing awareness that the existing legislative provisions for corporate income taxation that date back to the 1920s need to be modernized. Currently, the possibilities for taxation of digital businesses are discussed in the context of the OECD and EU. However, progress is slow due to the different views and interests of the countries involved. Therefore, several countries have planned or already introduced digital taxes unilaterally. The purpose of the paper is to explore the specifics of digital taxes and to analyze the possibilities and challenges to their broader application. The paper is organized as follows: the first part outlines the most important digital business models; the second part dwells on the digital taxes that are implemented in several countries; the third part presents the projects for international coordination of these taxes; and the fourth part concludes.*

**Keywords:** *Digital taxes, Digital economy, BEPS Project, OECD, EU.*

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## 1. INTRODUCTION

The growth of the digital economy has led to the emergence of new types of business models based on online platforms. Thus, the provision of services has become increasingly accessible and profitable. The digital economy is already an important part of the everyday life of individuals and firms mainly as a result of the rapid expansion of the Internet throughout the world and the development of information technologies. These developments create important tax issues. The existing rules on corporate income taxation date back to the 1920s and they are applicable to businesses operating in different countries through some form of physical presence. Digital products, on the other hand, are provided online and do not require any type of physical presence of the supplier in the countries of the customers. Thus, the revenues from these services remain largely untaxed. Furthermore, in the past services were predominantly non-tradable, whereas in the digital age international trade with services has thrived.

It should be noted that the digital transformation creates challenges to corporate income taxation in all sectors of the economy and is not limited to the companies providing only electronic services. Multinational firms in general benefit enormously from digitalization. In a world of modern communications, it is relatively easy for businesses to run from many different locations, in increasingly complex supply chains - to the extent that identifying “the” location of a particular activity becomes increasingly difficult (Devereux, Vella, 2017, p. 95).

The present paper is focused specifically on the taxation of companies operating in the digital sector of the economy. Its objective is to analyze the specifics of digital companies and to explore the possibilities and challenges to their taxation. The paper is organized as follows: the

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first part outlines the most important digital business models; the second part dwells on the digital taxes that are implemented in several countries; the third part presents the projects for international coordination of these taxes; and the fourth part concludes.

## 2. MAIN TYPES OF DIGITAL BUSINESS MODELS

Technological development and the spread of Internet throughout the world have led to the creation of new types of business models based on online platforms. Generally, information and communication technologies are used in all sectors of the economy. Some companies, however, are specialized in the remote provision of services through the Internet, thus generating substantial profits. While some of these electronically provided products are paid (subscription services, online marketplaces, collaborative platforms), others are free of charge (social media, search engines) and are financed with advertising revenues. The main types of digital business models are presented in Table 1.

**Table 1.** Main types of digital business models

Model	Description	Method of financing
Online marketplaces	Sell goods or connect buyers and sellers	Placement fee or commission
Social media	Connect individuals and firms and enable them to share information	Revenue from targeted advertising messages
Search engines	Provide access to user generated content on the basis of Internet search	Revenue from targeted advertising messages
Subscription services	Provide continued access to digital services	Subscription fee
Collaborative economy platforms	Connect spare demand and supply in an online environment	Fixed or variable fees

**Source:** European Commission, OECD

Digital businesses have some specific features that distinguish them from traditional business models. These key characteristics were defined by the Organization of Economic Development and Cooperation (OECD). In the first place, digital companies operate in many countries without physical presence, thus they do not fall within the scope of the current legislative regulations.<sup>2</sup> The internationally accepted rules on corporate income taxation date back to the 1920s. In the past the issue of physical presence was solved through the concept of permanent establishment (PE) as a *compromise between source and residence claims* for tax jurisdiction. A source country may only tax a foreign person if such person participates to a significant extent in its economy (and only to the extent of such participation) with PE-type physical presence being an acceptable proxy for such sufficient participation (Brauner, Baez, 2015, p. 4). Most digital companies, however, do not need an office or other type of permanent establishment in the countries where they operate and generate revenues. Thus, the question arises how to allocate the taxing rights between the source and the residence country.

Secondly, most digital businesses rely on the contribution of customers (users) for value creation. In other words, large part of the content on the respective online platform is delivered directly or indirectly by its users. Users' participation can have different forms varying from

<sup>2</sup> The OECD uses the term "scale without mass" in order to describe the fact that digitalized companies often operate in a country only through virtual presence. This is in contrast to the traditional "brick and mortar" business models based on physical presence in the country where the customers are located.



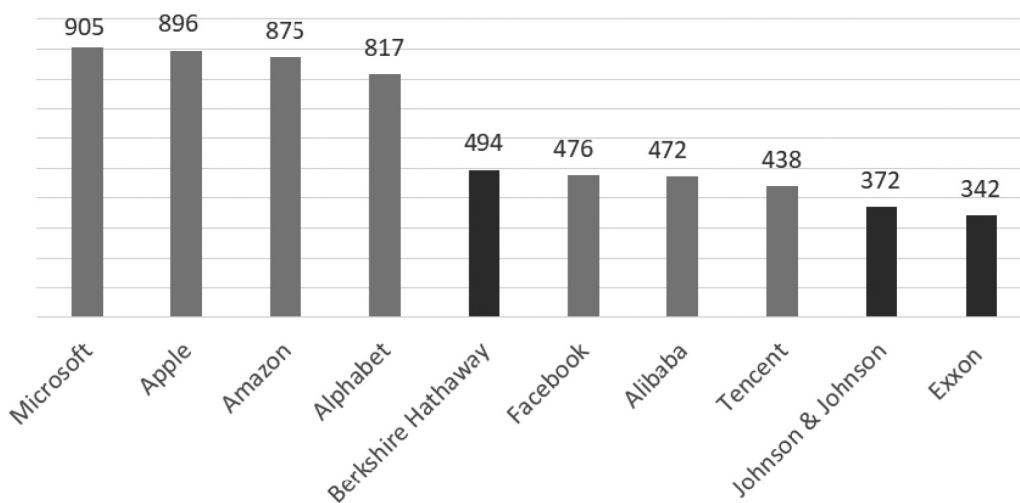
liking a page or writing a review to uploading content. In any case it contributes to the establishment of the brand, the generation of valuable data, and the development of a critical mass of users which helps to establish market power. The value generated by user participation is not captured under the existing international tax framework, which focuses on the physical activities of a business (OECD, 2019, p. 10)

Lastly, digital companies are characterized by strong reliance on intellectual property assets (such as software or algorithms) which support their platforms, websites and other critical functions of their business models. The active use of intangible assets makes difficult the allocation of profits of multinational enterprises and increases the risk for locating income in low or no tax jurisdictions (OECD, 2019, p. 6). It should be noted that intra-firm trade with intangibles is not limited only to digital companies. It has become an important channel for tax avoidance for multinational enterprises in many sectors of the economy. Solution of this problem is also sought in the context of other anti-tax avoidance legislative reforms.

These factors complicate the taxation of the incomes of digital businesses. It is not only a political matter, but poses a challenge from a technical point of view. There is an acknowledgment that it would be difficult to “ring-fence” the digital economy from the rest of the economy for tax purposes because of the increasingly pervasive nature of digitalization (OECD, 2019, p. 5). The two main questions are:

- *Where to tax?* – how to establish and protect taxing rights in a country where businesses can provide services digitally with little or no physical presence despite having a commercial presence; and
- *What to tax?* – how to attribute profit in new digitalized business models driven by intangible assets, data and knowledge (European Commission, 2017, p. 7).

Although addressing these challenges is difficult, there is an increasing understanding that the international tax regime should keep up with technological and economic developments. Moreover, digital companies are among the largest and most profitable in the world. As can be seen in Figure 1, in 2019 7 out of the 10 largest companies in the world, as measured by the market capitalization, belong to the digital economy and the top 5 includes 4 such companies.



**Figure 1.** Top 10 global companies by market capitalization in March 2019  
(In billions of dollars)

Source: PWC, 2019

### 3. DIGITAL TAXES IMPLEMENTED THROUGHOUT THE WORLD

The digital transformation of the economy has implications on both direct and indirect taxation, but with different degree of complexity. Although these issues cannot be entirely separated from the more general problem of tax avoidance of MNEs, digital business models require specific tax solutions.

As regards indirect taxes, solutions are available within the legal framework of value added tax.<sup>3</sup> As of 2020, over 70 countries in the world already charge VAT on electronically provided services (KPMG, 2020, p. 36). Moreover, in recent years most of them reformed the applicable rules on cross-border retail sales. In the past, business-to-business (B2B) services were subject to VAT in the country of residence of the customer, whereas business-to-consumer (B2C) services were taxed in the country of residence of the supplier (European Commission, 2019). The taxation of B2C services in the country of origin created competitive advantage for low-rate countries.<sup>4</sup> Nevertheless, its distorted market conditions and contradicted the basic principle that VAT should be levied in the country where the customers are located (the so-called destination principle). Therefore, in 2015 the OECD adopted a recommendation for introduction of the destination principle in all cross-border supplies of electronic services, regardless if the buyer is a registered business or a final consumer (OECD, 2019a). This change aimed at creating equal opportunities for local and foreign suppliers and to achieve fair allocation of VAT revenues. In accordance with these recommendations, many countries throughout the world switched to the destination principle of taxation of retail digital services. The European Union also implemented the OECD recommendations in its VAT legislation.<sup>5</sup>

The inclusion of the profits of digital companies in the “tax net” is more challenging, due to the characteristics presented in the first part of the paper. It requires an extension of the definition of permanent establishment, thus giving source countries the right to tax on their territory the profits generated through remotely provided services. Only two countries, Indonesia and Israel, have already introduced such changes in their legislations. However, in order to be effective an update of the definition of permanent establishment should be applied on a worldwide basis.

An alternative approach is to adopt a digital services tax (DST) on the revenue stemming from the provision of digital services. Several countries throughout the world have already adopted such taxes, while others have announced their introduction. Digital services taxes are aimed only at the digital services which involve users’ contributions for value creation. The taxes already implemented are summarized in Table 2. Italy’s DST (in effect since 1 January 2020) has the widest scope. It is levied at a rate of 3% on the gross revenue from the three main types of digital services: advertising on a digital interface; a multilateral digital interface that allows users to buy/sell goods and services; and the transmission of user data generated from using a digital interface (KPMG, 2020, p. 8). In other cases, the scope of the DST is limited to one type of digital business. For example, Kenya applies such a levy on the income accruing from digital marketplaces, Costa Rica and Greece introduced taxes on the income from provision of tourist rental services via digital platforms, whereas Austria and Hungary have implemented digital advertising taxes only on the revenues from advertising services on digital interfaces (KPMG, 2020).

<sup>3</sup> Some countries apply a Goods and services tax but it is also a multi-stage tax with input deduction like VAT.

<sup>4</sup> For example, Luxembourg for many years applied a VAT rate of 15% (the lowest possible in the EU), thus attracting many technological companies and raising significant revenue.

<sup>5</sup> Council Directive 2006/112/EC of 28 November 2006 on the Common System of Value Added Tax.

As can be seen from the table, a number of countries have instead chosen to include the revenue from digital services into the scope of the already existing legal regulations, and in particular withholding taxes (WHT). Generally, withholding taxes are applicable to different types of income accruing only to non-residents in a jurisdiction. As can be seen from the table, several countries, including Malaysia, Mexico, Slovakia and Turkey, have extended their withholding tax regimes to the income arising from the provision of certain digital services. The main disadvantage of withholding taxes is that they discriminate against foreign companies. Although this approach is a second-order alternative to a solution on the basis of digital permanent establishment, it is considered a possible response to the challenges of the digital economy (Brauner and Baez, 2015, p. 3).

**Table 2:** Implemented direct taxes on the digital economy as of March 2020

Type of tax	Countries	Scope	Rate
<b>Digital services tax (DST)</b>	France	<ul style="list-style-type: none"> <li>Provision of digital interfaces enabling users to interact with each other;</li> <li>Provision of services to advertisers which aim at placing targeted advertisements on a digital interface;</li> </ul>	3%
	Italy	<ul style="list-style-type: none"> <li>Advertising on a digital interface;</li> <li>Multilateral digital interface that allows users to buy/sell goods and services;</li> <li>Transmission of user data generated from using a digital interface</li> </ul>	3%
	Kenya	<ul style="list-style-type: none"> <li>Income accruing from digital marketplaces</li> </ul>	n.a.
	Tunisia	<ul style="list-style-type: none"> <li>Not yet determined</li> </ul>	3%
	Turkey	<ul style="list-style-type: none"> <li>Digital advertising,</li> <li>Sales of digital content,</li> <li>Services for the provision of digital platforms</li> </ul>	7.5%
<b>Digital advertising tax (DAT)</b>	Austria	<ul style="list-style-type: none"> <li>Revenue from advertising on digital interfaces</li> </ul>	5%
	Hungary	<ul style="list-style-type: none"> <li>Net turnover from broadcasting or publications of advertisements</li> </ul>	7.5%
<b>Tax liability for tourist rental services</b>	Costa Rica, Greece	<ul style="list-style-type: none"> <li>Income from the provision of rental services via the Internet</li> </ul>	n.a.
<b>Withholding tax (WHT)</b>	Malaysia	<ul style="list-style-type: none"> <li>Payments to non-residents from the provision of certain digital services</li> </ul>	Variable
	Mexico		Variable
	Pakistan		5%
	Slovakia		5%
	Taiwan		n.a.
	Turkey		7.5%
Vietnam	Variable		
<b>Equalization levy</b>	India	<ul style="list-style-type: none"> <li>Gross revenue from online advertising</li> </ul>	6%
<b>Digital permanent establishment (Digital PE)</b>	Indonesia Israel	<ul style="list-style-type: none"> <li>Revenue related to digital presence</li> </ul>	n.a.

Source: KPMG, 2020

The existence of different approaches towards the taxation of the digital economy creates legal uncertainty for businesses and increase administrative and compliance costs. Moreover, the recent experience has shown that applying direct taxes on the digital economy is difficult from a technical point of view, especially in the absence of internationally accepted rules. Therefore, these fiscal instruments can be viewed as a temporary measure until a common approach is agreed on a global scale. It is to be seen in the years to come if the digital taxes already implemented are successful. The experience of the countries that have adopted such levies can serve as a basis for the improvement of the international tax regime.

#### 4. PROJECTS FOR INTERNATIONAL COORDINATION

In recent years, there have been two important international initiatives for modernization of corporate income tax rules in the context of the digital economy. A coordinated response, including the introduction of a concept of “digital permanent establishment”, is the preferred approach by the European Union. In 2018 the EU presented a draft directive on the corporate taxation of significant digital presence. The objective of this proposal was to extend the concept of permanent establishment so as to include a significant digital presence through which a business is carried on and establish rules for the attribution of profits generated through such significant digital presence (Eur-Lex, 2018).

In parallel, the EU also put forward a draft directive on the common system of a digital services tax as an interim measure until the reform of the PE definition in a global context. According to the draft the DST at a rate of 3% would be levied on the gross annual revenue from the provision of three types of digital services: the placing on a digital interface of advertising targeted at users of that interface; the making available to users of a multi-sided digital interface which allows users to find other users and to interact with them, and which may also facilitate the provision of underlying supplies of goods or services directly between users; and the transmission of data collected about users and generated from users’ activities on digital interfaces. The tax would apply only to companies with a total gross annual turnover exceeding 750 million euro and a gross turnover in the EU over 50 million euro (Eur-lex, 2018a). According to the calculations of the European Commission the DST would raise around 5 billion euro per year in all Member States.

The two proposals did not obtain the necessary unanimity of the Member States. At the beginning of 2019 the European Commission presented a revised draft, according to which the DST would be applicable only to the revenue from online advertising, but it was also rejected.

In the last decades, the Organization of Economic Cooperation and Development (OECD) asserted itself as the main platform for international coordination of corporate income taxation. In 2013 the OECD, together with G20, launched the so-called *Base Erosion and Profit Shifting Project (BEPS Project)* and as of 2020 over 135 countries are participating in the BEPS Project Inclusive Framework. The overall aim of the project is to limit the possibilities of multinational enterprises (MNEs) to avoid taxes through profit shifting strategies. It consists of 15 actions each of which is targeted towards a particular issue.

Action 1 of the BEPS Project is particularly focused on the challenges arising from digitalization. The specific measures were elaborated in a Programme of Work from May 2019 and were divided in two pillars. Pillar one has the objective to determine an appropriate method for reallocation of the taxing rights among the countries where digital companies operate. Pillar two is intended to ensure that the income of every multinational corporate group is subject to tax at a minimum rate thereby reducing the incentive to allocate returns for tax reasons to low taxed entities (OECD, 2019b, p. 32).

At the beginning of 2020 the Inclusive Framework of the BEPS Project issued a statement outlining concrete measures. As regards Pillar one, the proposal does not contain a change in the definition of “permanent establishment”. Instead it introduces a new mechanism for allocation of taxing rights between countries, which will allocate taxable profits of digitalized companies according to a formula, instead on the basis of transfer prices. This method takes into account

the possibilities of digital MNEs to operate and generate revenues in many jurisdictions without physical presence. Its application will be limited only to a share of the residual profit, if the amount so allocated is over and above the arm's length return that might be allocable to in-market activities such as baseline marketing and distribution (OECD, 2020, p. 9). In addition, it will be applicable only to large MNEs and under the conditions that: the digital services are automated<sup>6</sup> and the revenue is generated from the sale of goods and services only to final consumers.

As already mentioned, Pillar two of BEPS Action 1 involves measures intended to limit the possibilities of digitalized MNEs to shift their profits to low-tax jurisdictions. Its implementation is based on the introduction of an income inclusion rule. The approach proposed by the OECD is to establish this rule as a top-up tax to a minimum rate calculated as fixed percentage. Its effect would be to protect the tax base of the parent jurisdiction as well as other jurisdictions where the group operates by reducing the incentive to put in place intra-group financing (OECD, 2020, p. 28). In addition, several other mechanisms are envisaged to complement the income inclusion rule.

A final report on the measures under BEPS Action 1 is expected by the end of 2020. However, many important issues remain unresolved. In the first place, the BEPS project does not provide a single definition of the digital economy. It only defines the characteristics of highly digitalized business models, but as already mentioned some of these features are present also in business entities from other sectors of the economy. Therefore, it is not clear which companies will fall under the scope of the proposed new rules.

Furthermore, several elements of the reform project are not likely to gain unanimous support. Despite the progress on the technical details, the OECD recognizes that there are some areas where critical policy differences remain. Most importantly, at the end of 2019 the United States presented an alternative proposal to implement Pillar one on a "safe harbor" basis. This would mean that the application of the new mechanism would be optional for MNEs. Many other members of the BEPS Inclusive Framework have expressed concerns that the inclusion of such "safe harbor" provision could undermine the overall impact of the reforms (OECD, 2020, p. 4).

Some authors are also skeptical towards the overall effects of the BEPS project on international aggressive tax planning. According to Devereux and Vella (2015, p. 98) even if successfully completed, the BEPS project could not fully eliminate the incentives and opportunities for tax avoidance of large multinational companies, but instead will influence the allocation of real economic activities. These authors suggest alternative options to the current regime, including through increased taxes on the income of the ultimate shareholders in a multinational company rather than the income of company itself. The reasoning behind this proposal is the lower mobility of individuals in comparison to corporate profits.

## 5. CONCLUSION

The thriving digital sector of the economy creates significant tax challenges. Although these challenges cannot be entirely separated from the more general problem of tax avoidance of MNEs, digital business models require specific solutions. Digital transformation has implications to both direct and indirect taxation. With respect to indirect taxes, the existing rules have

<sup>6</sup> Automated digital service includes online search engines; social media platforms; online intermediation platforms, including the operation of online marketplaces, irrespective of whether used by businesses or consumers; digital content streaming; online gaming; cloud computing services; and online advertising services.

been already updated in many countries in the context of VAT legislation. The inclusion of the profits of digital companies in the tax net is much more complicated. There is an increasing understanding that large multinational companies have to pay their fair share of the costs of financing the public sector, but a commonly accepted approach has not been worked out yet. In the last years digital taxes have spread around the world, but the specific organization varies from country to country.

On an international level the work on direct taxation of digital companies advances at a relatively slow pace, due to the necessity to reconcile the differing views and interests of the countries involved. The European Union has been unsuccessful in its efforts to introduce new tax rules for the digital sector. Thus, the OECD, in close cooperation with G20, has become the main locomotive for the reforms, which are carried out through BEPS Project. Action 1 of the project contains concrete measures aimed at taxing the earnings of digital businesses and a consensus-based solution is expected by the end of 2020. However, some unresolved issues remain.

Against this background, it can be expected that in the near future the tax issues concerning the digital economy will be tackled on a country-by-country basis, through digital services taxes or other fiscal instruments. Unilateral actions complicate tax systems, lead to higher administrative and compliance costs and increase the risk of aggressive tax planning. On the other hand, they reflect the views and fiscal necessities of the respective country. If successful, digital services taxes already implemented can serve as the basis for improvement of the international tax regime.

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# AN ANALYSIS OF THE EU'S INVESTMENT POLICY AFTER CETA: EFFECTS ON THE BULGARIAN ECONOMY

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**Abstract:** *In this paper we analyze the changes of the EU's investment policy provoked by the mixed trade agreements. The EU's investment policy has turned towards attaining bilateral trade agreements. One of these "new-generation" agreements is the Comprehensive Economic and Trade Agreement (CETA). It is in a process of being ratified by the national parliaments of the EU members. This study is focused on the general characteristics of CETA and the eventual problems posed by its regulatory and wide-ranging nature. We prove that the significance of this agreement pertains not only to the economic influence, that it will have on the European and Canadian economies, but CETA is also the first trade agreement to have been negotiated with a focus on investment protection and a change in the EU's investment policy. The current study reveals the influence arising from the conclusion of CETA on the Bulgarian economy with an emphasis on electronic industry, machinery industry and manufacturing. We estimate both – the direct and indirect effects on Bulgaria's exports, imports, value added and employment. In order to estimate the influence, we apply the multi-regional input-output model. It is proved that CETA will have a low but positive impact on the Bulgarian economy. After constructing different scenarios of development, we prove that the influence of CETA on the Bulgarian economy will amount to 0.010% GDP. The average total employment will be increased by more than 172 jobs in Bulgaria, which in turn, relative to the labor market, represents less than 0.01% of the total employment.*

**Keywords:** *International Investment Agreement, CETA, Investment Court System.*

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## 1. INTRODUCTION

Analyzing the concept of "investment", "investor" is an important issue not only from a theoretical and practical point of view, but because of their definition, scope and application in the legal systems of EU Member States. Canada and Bulgaria enjoy mutually beneficial commercial relations – trade, investment, corporation on innovation, science and technology. The Comprehensive Trade and Economic Agreement (CETA) is defined as a complex trade agreement because it liberalizes economic relations between the parties, not only in the sectors that concern trade of goods and services but in "investor-to-state-dispute settlement". The settlement of investment disputes between investors and countries within the scope of CETA is a new procedural and legal mechanism, replacing the ISDS method. The focus is on the protection of investments, in particular those related to the settlement of disputes between states and investors. There are questions whether the text of CETA is "in favour" of corporate investors over the states or enables investors to arbitrage against state under ISDS. *Important contribution of this research is the description of the positives and negatives of CETA ratification with a focus on the investment policy, measuring the economic effects on the Bulgarian economy.*

Methodological and theoretical basis of the research can be formulated in the following sequence:

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1. Theoretical analysis based on previous theoretical and empirical researches;
2. Development and implementation of practical econometric models. The analysis which reflects the quantitative results of the application of econometric methodology is based on the Multi-regional Input-output Model.

## 2. THEORETICAL AND LITERATURE REVIEW

In recent years, as the processes of globalization and liberalization of the financial markets have increased, customs duties are increasingly losing their fiscal function. Therefore, the EU policy, aiming to conclude economic agreements with strong and developed economies such as the US and Canada, is rather geopolitical in nature rather than commercial and fiscal. According to Grigonis (2019) the Court of Justice of the European Union has estimated the compatibility of the reformatory Investment Court System of the EU's trade agreement with Canada. He considers that CETA's ICS mechanism could result in adverse effects on uniform interpretation of EU law and negatively affect the autonomy of the EU legal order. He describes that the use of "prevailing interpretation" foreseen in CETA does not ensure the CJEU's exclusive jurisdiction. Involvement of the CJEU in the proceeding of the ICS mechanism is suggested as an option to resolve the incompatibilities of the ICS with the autonomy of EU legal order.

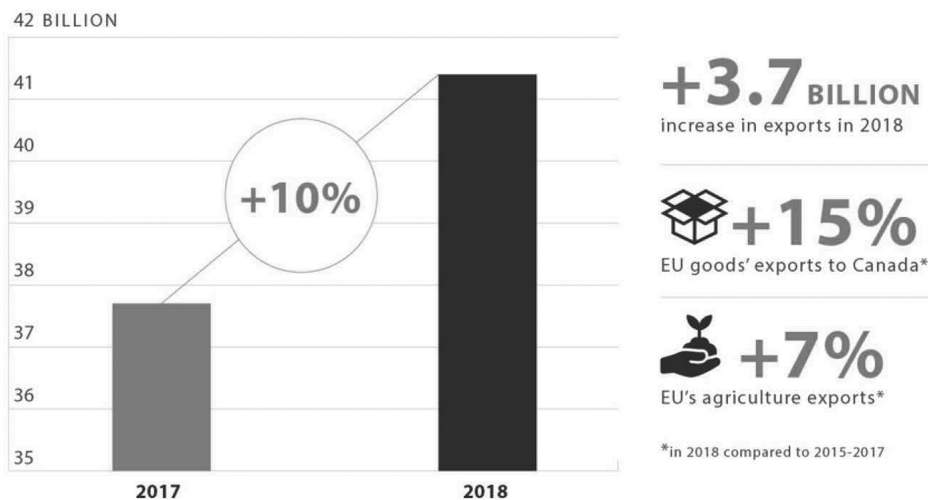
CETA is considered as a new generation agreement. It does not concern only free trade; it regulates the investments' flows and intellectual property rights. CETA will eliminate 98% of custom duties and import tariffs. The final chapter of CETA concerning a new version of investor state dispute settlement sets CETA apart from the others existing bilateral trade agreements. The principal sectors that CETA promise to bring changes and facilitate accelerated smooth trading relationship are exposed in Figure 1. CETA will be one of the most ambitious and comprehensive FTAs ever signed by either Party, and covers namely: Comprehensive tariff elimination across all sectors; Improved access for goods and services; Greater certainty, transparency, and protection of investments; New opportunities in procurement markets.



**Figure 1:** Principal Components of CETA

Source: Government of Canada <https://www.fdfa.be>

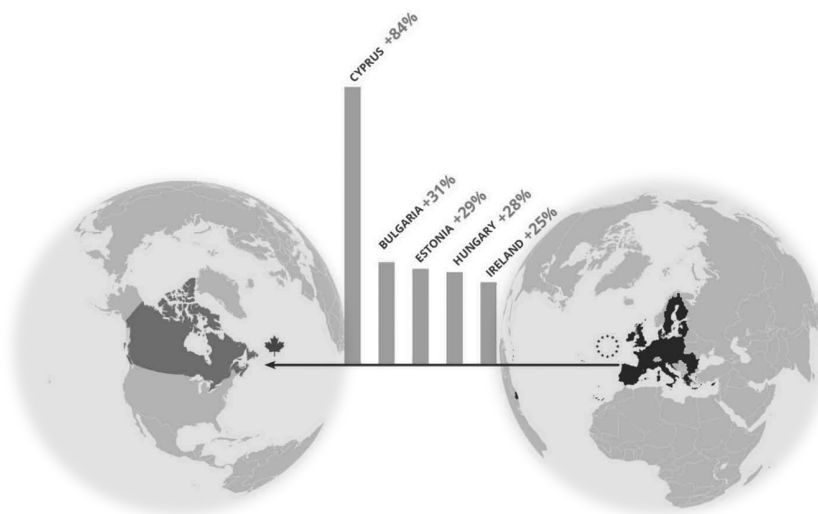
CETA is an important trade agreement, not only because of its content and text, but because of the two parties – EU and Canada. EU and Canada represent 23% of the world's GDP. The Canada-EU Comprehensive Economic and Trade Agreement gives companies based in Canada unprecedented access to 28 countries, more than half a billion consumers and a \$24-trillion market. In 2018, Canada's merchandise exports to the EU were nearly \$44.5 billion, an increase of 7% over 2017. The European Commission has published a comparative analysis – 2018 vs 2017. The results prove that CETA will boost EU export. It is reported an increase of 15% of EU goods exports to Canada in 2018 compared to 2015-2017 and an increase equal to 7% of EU agricultural exports to Canada in 2018 compared to 2015-2017.



**Figure 2.** The trade deal is boosting EU exports

Source: [www.consilium.europa.eu](http://www.consilium.europa.eu)

Bulgaria's export growth has increased with 31%. It is one of the European countries whose export has boosted as a result of CETA. The countries, that we should focus on are the following ones: Cyprus – an increase in export growth about 84%; Estonia – an increase in export growth about 29%; Hungary – an increase in export growth about 28% and Ireland – an increase in export growth about 25%.



**Figure 3.** European countries with the highest export growth

Source: [www.consilium.europa.eu](http://www.consilium.europa.eu)

In 2018, the top five fastest growing large export sectors were aluminum (up 378%), motor vehicles and parts (up 89%), mineral fuels and oils (up 84%), inorganic chemicals (up 82%) and wood pulp (up 45%). CETA will give opportunities for greeting new jobs. According to the results of the European commission 865,000 in the EU are tied to exports to Canada in 2018 compared to 2015-2017, and 221,000 people in the EU are working for Canadian companies.

CETA is an agreement that provoked debates about the positives and negatives by its ratification. According to Glossop, Dattu and Kim (2017) CETA presents essential opportunities for Canadian and EU businesses. CETA will confer significant tariff and non-tariff trading advantages over competitors in countries who are not entitled to the benefits of CETA. In addition, CETA can also potentially benefit EU and non-EU companies who invest in Canada and then use Canada as a “gateway” to conduct business on a free trade basis in both North America (using the North American Free Trade Agreement or “NAFTA”) and the EU (using CETA). CETA will ensure investors are accorded both “national treatment” and “most-favoured-nation treatment,” meaning that investors cannot be treated in a less advantageous manner than domestic investors or investors of any other country. However, governments may act in the public interest when regulating health, safety and the environment and this will not be considered contrary to the investment provisions. In Figure 4, we have systematized the main positive and negative effects of CETA.

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. CETA is boosting EU export;</li> <li>2. Tariff Elimination for Trade in Goods;</li> <li>3. Facilitate mutual recognition of diplomas and regulate investment disputes by creating a new system of courts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Unclear definition of ISDS mechanism;</li> <li>2. It benefits only big business and multinational corporations;</li> <li>3. Tariff Elimination for Unhealthy food (GMFs)</li> </ol>
Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Labour mobility and new jobs;</li> <li>2. Investment protection;</li> <li>3. It creates a more level playing field between Canada and EU on intellectual property rights.</li> </ol>	<ol style="list-style-type: none"> <li>1. CETA may weaken consumer rights;</li> <li>2. The impact intellectual property rights in CETA will grant monopoly to a given medicine.;</li> <li>3. ISDS mechanism which makes critics fear that multinational corporations could sue national governments for a great sum of money if they considered that the government policies had a bad impact on their business</li> </ol>

**Figure 4.** Benefits and Threats of CETA

**Source:** Authors’ systematization

According to a report of the European Commission (2016) Bulgaria will benefit from tariffs in machinery and electrical equipment; optical instruments and medical instruments; chemicals; pharmaceuticals. Bulgarian farmers will benefit by the offered opportunities by CETA. With CETA, Bulgarian corporations will get an access to Canada’s public procurement market. Canada will bring copyright protection of Bulgarian innovations in line with international standards.

CETA requires a relationship between investors and the assets without defining its notions. Section F of CETA Chapter 8 defines the rules on the settlement of investment disputes between investors and State. CETA includes a new model of investor-to state dispute settlement”.

**Table 1.** Number of cases against Bulgaria

№	Year	Case name	Home state of investor	Responded State	Outcome of original proceeding
1.	2018	ACF v BG	Malta	Bulgaria	Pending
2.	2018	Levy and Ramot v. BG	Israel	Bulgaria	Pending
3.	2016	CEZ v. BG	Czechia	Bulgaria	Pending
4.	2015	ENERGO PRO v. BG	Czechia	Bulgaria	Pending
5.	2015	Shareholding in Corporate Commercial Bank v. BG	Oman	Bulgaria	Pending
6.	2013	EVN v. BG	Austria	Bulgaria	Decided in favour of State
7.	2012	Novera v. BG	Netherlands	Bulgaria	Data not available
8.	2011	Accession Easternv. BG	Sweden	Bulgaria	Discounted
9.	2010	ST-AD v. BG	Germany	Bulgaria	Decided in favour of State
10.	2003	Nova Plama AD v. BG	Cyprus	Bulgaria	Decided in favour of State

**Source:** <https://icsid.worldbank.org/en/Pages/cases/AdvancedSearch.aspx>

From the data in Table 1, we may conclude that there are five pending cases against Bulgaria and only three of the cases are closed. It seems that during the recent years, investors and corporations are realizing the opportunity that arbitration gives them. The files of the cases against Bulgaria are secret, so there is no formal information for their effects on the Bulgarian economy.

Kirkpatrick et. al (2011) describe the expected impact of the CETA in a long-term aspect. In the study positive impact for both parties of the partnership is predicted: namely on population welfare, real GDP (CETA should contribute to an increase in EU economic growth of approximately 0.1 to 0.2% and in Canada by 0.18 to 0.36%), exports, and positive impact on wages.

Dovalova et. al (2018) examine the impact of the Economic and Trade Agreement (CETA) between the European Union and Canada on the Slovak economy, with an emphasis on the automotive, mechanical engineering and electronics industries. The aim is to assess the direct and indirect effects of changes in international trade on Slovakia, applying the multi-regional entry-exit model. Based on different development options, it is estimated that the average impact of CETA on the Slovak economy as a result of the removal of tariff barriers will amount to 0.013% of GDP, while the impact on job creation is estimated at 0.012% of total employment. Removing tariff barriers should lead to an 8% increase in exports to Canada on average, with a strong price response of as much as 18%

Ventura and Prego (2017) examine the impact of CETA on trade flows between Portugal and Canada with wine, assessing its impact on the Portuguese wine sector. The research contains an in-depth study of the Canadian wine sector, Canadian profile and trends analysis to deal with strengths, weaknesses, opportunities and threats related to the positioning of Portugal on the Canadian market with a view to the entry into force of CETA.

Gullu, Kilic and Sanlioglu (2017) evaluate the EU-Canada Comprehensive Economic and Trade Agreement (CETA) in terms of Turkish foreign trade. According to them CETA that European Union signed with Canada on November 30, 2016 has the quality to result in economic, social

and cultural consequences by making norms as compatible not only by removing tariff barriers differently from formers. In addition to this, consequences that cause some concerns in terms of Turkey that is still candidate country to EU are possible. They mention that Turkey had stayed out of negotiation period of CETA as is the case with meetings of Transatlantic Trade and Investment Partnership (TTIP) that EU started negotiations with USA. On the other way, Turkey has been affected by CETA because of applying Customs Union Agreement with EU since 1996. Like agreements that EU has made with other countries, CETA will deepen the negative effects of Customs Union Agreement on foreign trade of Turkey. According to them, Turkey has been affected by CETA because it was applying Customs Union Agreement with EU since 1996. Like agreements that EU has made with other countries, EU-Canada Comprehensive Economic and Trade Agreement is going to deepen the negative effects of Customs Union Agreement on foreign trade of Turkey.

In a report of Department of International Trade, Ciuriak, Dadkhah, and Xiao (2018) explored the impact assessment for the UK ratification of CETA. The study shows the potential consequences of this agreement for the UK economy. They analyse the impacts of the European Union (EU)-Canada Comprehensive Economic and Trade Agreement (CETA) on the United Kingdom (UK) and Canada. The majority of this agreement came into effect when it was provisionally applied on 21 September 2017. Their analysis focuses on the economic impact of CETA under two scenarios: 1. CETA comes into effect, liberalising trade between the EU28 and Canada in 2017. The UK and Canada continue to trade on CETA terms following the UK's exit from the EU. 2. CETA comes into effect, liberalising trade between the EU28 and Canada. From 2019, the UK and Canada trade under WTO Most Favoured Nation (MFN) rules, while EU27 and Canada continue to trade under CETA preferences. Their results from scenario 1 show CETA increases UK bilateral exports (£676 million), GDP (£730 million) and economic welfare (£408 million) in 2030 against a baseline of no CETA. The UK's reversion to MFN-based trade with Canada (scenario 2) generates minor negative impacts on the UK from trade diversion, equivalent to a fall in UK GDP by £69 million. Ciuriak, Dadkhah, and Xiao (2018) prove that the difference between the two scenarios quantifies the net contribution of liberalisation between the UK and Canada, and thus the opportunity cost to the UK of not remaining in CETA following EU exit. This is estimated at just under £800 million in forgone GDP.

Tamminen, Niemi and Hakkala (2017) explore the expected economic impacts of the EU-Canada Comprehensive Economic and Trade Agreement in Finland. Their study analyses the expected impacts of the agreement to the Finnish economy by applying a GTAP CGE model and microdata analyses on the current trade structures. They prove that the expected GDP impact of 0.04 percent to Finland is slightly higher than the EU average (0.03 percent). In terms of value added, most sectors in Finland grow minimally as a result of the CETA. The highest bilateral trade effects are found for motor vehicles and transport equipment industries where both bilateral exports and imports are expected to increase by over 100 percent. Further, the extensive liberalisation of services trade is likely to have some positive effects for Finland as some 30-50 percent of the current domestic value added from Finnish exports to Canada originated from service exports. Even nearly total opening of public procurement markets to EU exporters in Canada is not, again, likely to result in very large benefits for EU firms in absolute terms, while some increases are possible. One of their most significant result is that the reduction of fixed and marginal costs of exporting in the CETA agreement is likely to open the Canadian market to Finnish SME exporters, which have not entered the Canadian market as well as other export markets until now.

### 3. ECONOMETRIC METHODOLOGY FRAMEWORK

The current research is based on the applied methodology of Dovalova et al (2018). The data were provided by the following sources: National Statistical Institute, Eurostat, the World Bank, United Nations Conference on Trade and Development (UNCTAD) and the International Trade Centre (ITC). The basic source of data for the model estimates of the impact of CETA on the economy of Bulgaria is the World Input-Output Database, which includes the World Input-Output Tables (WIOT). The applied econometric methodology is Multi-regional Input-output Model (MIOM). Because of the fact that the applied input-output tables include: intermediate consumption data, value added data and final use table. We have constructed matrices and vectors based on the WIOT. The intermediate matrices are defined by Z, the final demand matrix by Y, the total production by X, the value added by p and the employment by e. The Z matrix has the following form:

$$Z = \{z_{ij}^{pu}\} = \begin{bmatrix} z^{11} & \dots & z^{1k} \\ \vdots & \ddots & \vdots \\ z^{k1} & \dots & z^{kk} \end{bmatrix} \quad (1)$$

Where the production of industry  $i$  from the country of origin  $p$  intended for intermediate consumption in industry  $j$  in the target country  $u$ . Total production matrix includes information for the production of industry  $i$  in  $k$  country. We apply an input coefficient matrix with the following form:

$$A = z\widehat{x}^{-1} \quad (2)$$

As it is detailed explained by Davalova et. al. (2018) and Kirckpatrick (2011) by applying total production vector, final demand vector and intermediate consumption matrix, we have the ability to construct a system of equations in order to deduce the MIOM. Following the aforementioned steps, MIOM gets the following form:

$$x = (I - A)^{-1}y = Ly \quad (3)$$

Where

L - Leontief inverse matrix. Leontief (1953) uses data from 1947 input – output model of the U.S economy. He proves that the US was a capital – rich country and had abundance of capital relative to labour than did its trading partners.

In order to analyze the effects on final demand, we apply value added and employment vectors. The vector of value added may be presented by the following equation:

$$p' = [p'^1 \dots p'^k] = [p_1^1 \dots p_n^1 \dots p_1^k \dots p_n^k] \quad (4)$$

When we divide by the production of industry, the result is value added coefficient . It presents the value added produced by individual industries to one unit of production. Adding the Leontief inverse matrix, we aim to calculate a matrix of cumulative value-added coefficients. The matrix will be presented by the following form:

$$P = \widehat{p}_c L = \begin{bmatrix} \widehat{p}_c^1 & \dots & 0 \\ \vdots & \ddots & \vdots \\ 0 & \dots & \widehat{p}_c^k \end{bmatrix} x \begin{bmatrix} L^{11} & \dots & L^{1k} \\ \vdots & \ddots & \vdots \\ L^{k1} & \dots & L^{kk} \end{bmatrix} \quad (5)$$

The influence of the changes on value added and employment may be presented as:

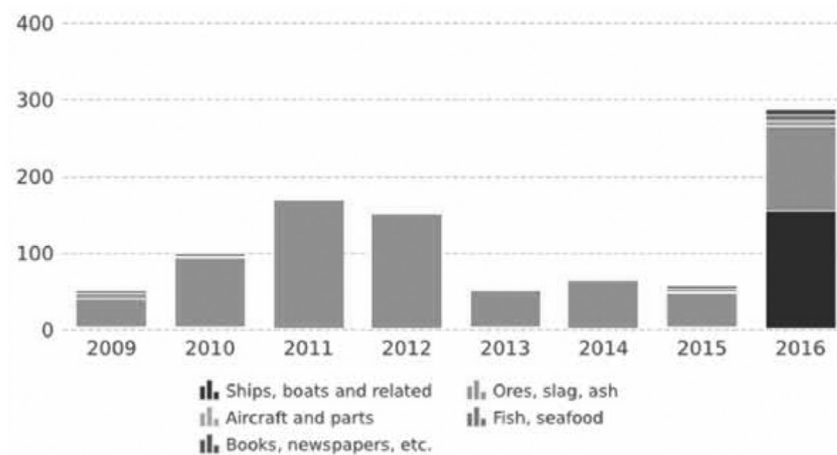
$$p^{gen} = \hat{p}_c L y^{ex} \quad (6)$$

$$e^{gen} = \hat{e}_c L y^{ex} \quad (7)$$

Where

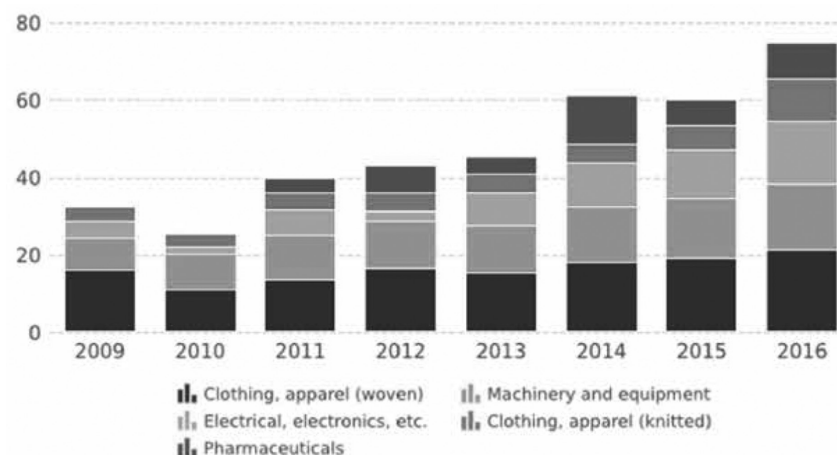
- $p^{gen}$  - effects on value added;
- $e^{gen}$  - effects on changes of employment;
- $y^{ex}$  - changes in the final demand.

In order to establish which industries should be included in the current research, we observe trade flows between Canada and Bulgaria (Figure 5 and Figure 6). Bilateral merchandise trade between Canada and Bulgaria in 2016 is \$450.6 million. The highest-valued imports in 2016: men's suits and ensembles, medications, electrical and electronics together accounting for 11.9% of the total value of Canadian imports from Bulgaria. The highest-valued exports in 2016: dredgers and floating or submersible vessels, and copper ores, together accounting for 84.9% of the total value of Canadian exports to Bulgaria.



**Figure 5.** Most Highly Valued Exports by Product Category (\$ millions)

Source: <https://lop.parl.ca/staticfiles>



**Figure 6.** Most Highly Valued Imports by Product Category (\$ millions)

Source: <https://lop.parl.ca/staticfiles>



The direct effects of CETA on the Bulgarian economy are measured by the exports of intermediates and final products to Canada. The indirect effects are measured by the exports of intermediates to other countries which export them to Canada. In order to reveal the effects of CETA on the Bulgarian economy, we import the following variables as exogenous in the constructed model: dynamic in GDP in EU Member states; dynamic in GDP in Canada; an increase in total exports of the EU and Canada; an increase in the total export of Bulgaria.

To estimate the change of exports from Bulgaria to Canada we need to calculate the elasticity. The values of elasticities are generally not known with precision. According to Donnelly et. al (2004) elasticities are preferably generated by statistical or econometric methods based on the historical behavior of prices and quantities and then examined for consistency with economic theory and analysts' intuition about products and industrial processes. In this study, we apply three methodologies in order to estimate elasticity. The USITC model is a single country model which includes 497 sectors (Ingersoll et. al., 2004). The GTAP model is a global model that includes 497 sectors. It depicts 78 countries and includes 57 commodities (Ingersoll et. al., 2004). Gallaway, McDaniel and Rivera (2002) estimate short – term elasticity by an econometric approach.

**Table 2.** Estimated Elasticities

	GTAP	USITC	Gallaway*
Electronic Industry	2.1	3.0	1.024
Manufacturing industry	2.1	3.2	2.125
Machinery industry	3.5	4.5	3.15

**Note:** \*Calculated based on converters and aggregated using weightings of the most important export commodities from Bulgaria to Canada in corresponding industries.

**Source:** Ingersoll et al. (2004); Gallaway, McDaniel and Rivera (2002).

To estimate direct and indirect effects, various scenarios are constructed (Kirckpatrick, 2011). The Baseline scenario aims to quantify the effects in the absence of CETA.

**Table 3.** The constructed scenarios for estimation of CETA effects on the Bulgarian economy

	Variant (1-4)	Change in the Bulgarian GDP (5)	Elasticity of the change of export (a-c)
1	Scenario A, indirect effects	It is characterized by a lack of direct change in the exports of final production from Bulgaria to Canada	-
2	Scenario A, limited liberalisation	In increase in the export to 0,05 % (average level of the EU Member States)	-
3		Depending on the elasticity	Gallaway
4		Depending on the elasticity	USITC
5		Depending on the elasticity	GTAP
6	Scenario D, indirect effects	It is characterized by a lack of direct change in the exports of final production from Bulgaria to Canada	-
7	Scenario D, absolute liberalisation	In increase in the export to 0,07 % (average level of the EU Member States)	-
8		Depending on the elasticity	Gallaway
9		Depending on the elasticity	USITC
10		Depending on the elasticity	GTAP

**Source:** Authors' modification based on Davalova (2018)

## 4. EMPIRICAL ANALYSIS

### 4.1. Indirect effects of CETA on the Bulgarian economy

The low final result of the indirect effects (scenario 1) implies an increase of gross value added in the whole Bulgarian economy by approximately \$3 million while the highest estimate (scenario 6) is about \$4 million. We get identical results when exploring the effects on individual industries. Scenarios that do not imply a direct change in the volume of trade with final production between Bulgaria and Canada report an increase in the employment from 78 to 93 workers as a result of a change in the volume of national demand caused by trade flows between Canada and EU Member States. So, the structure of impacts in individual industries is very similar to the structure of the influences on value added.

**Table 4.** Indirect Effects on Value Added and Employment in Selected Scenarios

Scenario	Effects on value added USD million		Effects on employment USD million	
	1	6	1	6
National economy	3.08	4.25	78	93
Electronic Industry	0.08	0.15	8	11
Manufacturing industry	0.19	0.28	14	27
Machinery industry	0.14	0.21	7	11

Source: Authors' calculations

The expected increase in the gross exports of Bulgaria as a result of the indirect ones the effects of CETA range from \$ 120,000 to \$ 230,000. Estimates on the effects on net exports range from \$ 120,000 to \$ 250,000. In both scenarios, there is a significant trade surplus. The most significant effect from the explored industries is recorded in the manufacturing sector.

**Table 5.** Indirect Effects on Exports and Net Exports to Canada in Selected Scenarios

Scenario	Effects on the export of Bulgaria to Canada USD million		Effects on the net export of Bulgaria to Canada USD million	
	1	6	1	6
National economy	0.12	0.23	0.12	0.25
Electronic Industry	0.01	0.02	0.01	0.02
Manufacturing industry	0.01	0.03	0.01	0.031
Machinery industry	0.01	0.02	0.01	0.024

Source: Authors' calculations

### 4.2 Total effects of CETA on the Bulgarian economy

The direct effects of CETA are measured by quantifying effects on value added and employment. In a report of the European Commission: "On the output side, GDP measures the sum of the gross value added created through the production of goods and services in the individual sectors of the economy. On the income side, it measures the sum of all incomes generated by the production of goods and services, and on the expenditure side, it measures the sum of domestic and (net) external demand for the produced goods and services" ([https://www.ecb.europa.eu/pub/pdf/other/mb200312\\_focus06.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/mb200312_focus06.en.pdf)). So, we may conclude that value added is considered to be one of the most important parts of GDP.

From the results in Table 6 the most optimistic scenario (i.e. the highest positive scenario for the Bulgarian economy) seems to be number 10. In the case of elastic changes after the removal of duties and the optimistic option D, we expect an increase of 0.012% of GDP to Bulgaria, which in absolute terms is \$ 9.35 million. Following the complete abolition of the tariff restrictions on textile exports to Canada, and taking into account the sensitivity of the textile industry to this change, we find that the increase in exports will lead to an increase in value added by 0.192%. The negative impact of CETA on the Bulgarian economy is presented in scenario 3. Short - term elasticity of Gallaway, McDaniel, and Rivera (2002) reveals almost completely non-elastic relation between the reduction of customs duties and the export of final products in the textile industry. In combination with partial tariff liberalization, the total impact on Bulgaria's GDP reaches \$ 4.20 million, which represents approximately 0.003% of GDP. The average value of the total impact of the considered scenarios for the national economy is \$ 10.15 million, with a standard deviation of \$ 4.28 million. This increase corresponds to approximately 0,010% of GDP, with a major contribution from the manufacturing sector and the mechanical engineering industry. The difference between the most optimistic and the most pessimistic scenario for the impact of the CETA is approximately \$ 5.15 million, depending on the level of tariff liberalization and the sensitivity of Bulgarian exports.

**Table 6.** Effects of CETA on the Creation of Value Added of Bulgaria

Scenario	Effect on value added in the whole national economy		Effect on value added in electronics industry		Effect on value added in machinery industry		Effect on value added in manufacturing	
	USD million	% change	USD million	% change	USD million	% change	USD million	% change
2	4.23	0.003	0.12	0.018	0.51	0.021	0.48	0.020
3	4.20	0.003	0.13	0.009	0.49	0.018	0.95	0.044
4	6.28	0.006	0.15	0.012	0.61	0.023	3.12	0.118
5	7.65	0.008	0.20	0.017	0.48	0.022	4.25	0.135
7	6.28	0.006	0.19	0.015	1.09	0.037	3.64	0.121
8	9.12	0.011	0.20	0.019	1.21	0.039	4.58	0.139
9	8.94	0.009	0.23	0.020	1.84	0.042	4.27	0.136
10	9.35	0.012	0.24	0.023	2.12	0.061	5.12	0.192
Average	10.15	0.010	0.23	0.014	1.24	0.033	3.56	0.118
Standard deviation	4.28	0.004	0.08	0.004	0.51	0.017	3.04	0.092
Minimum	4.20	0.003	0.12	0.018	0.49	0.018	0.48	0.020
Maximum	9.35	0.012	0.24	0.023	2.12	0.061	5.12	0.192

**Source:** Authors' calculations

The effects of CETA on the export of Bulgaria to Canada are presented in Table 7. The export of final products is an exogenous variable in the MIOM. The high sensitivity to the respective scenario is evidenced by the standard deviation, whose values are approximately equivalent to the average export value in the five forecast scenarios. In all variants, the dominant sector is manufacturing. This can be explained by the fact that among the main export products are textiles, clothing, equipment. In the most optimistic scenario, exports of textile goods and products will increase by \$ 11 million, due to the high elasticity and liberalization of duty rates. In this option, an increase in exports of goods from the manufacturing sector would represent almost

99% of the total increase in total exports. We should also note the high dependence of exports on elasticity in Scenarios 2 and 7. These scenarios may also be considered as the most pessimistic in the context of the impact on Bulgaria's exports to Canada. In these two scenarios, the effect of indirect links in the economy is clearly visible. Assuming that exports to Canada will increase by 0.05%, the overall increase in exports under partial liberalization will be equivalent to 0.009%, and in the case of complete liberalization, it will reach almost 0.06%.

**Table 8.** Effects of CETA on Bulgaria's Exports to Canada

Scenario	Effects on the total export of Bulgaria to Canada		Effects on the export of electronics industry of Bulgaria to Canada		Effects on the export of machinery industry of Bulgaria to Canada		Effects on the export of manufacturing of Bulgaria to Canada	
	USD million	% change	USD million	%	USD million	% change	USD million	% change
2	0.11	0.009	0.01	0.008	0.02	0.112	0.05	0.024
3	3.15	0.018	0.01	0.007	0.02	0.124	0.09	0.032
4	8.12	0.048	0.02	0.015	0.04	0.191	1.28	0.217
5	11.08	0.057	0.03	0.020	0.06	0.201	11.03	0.024
7	0.10	0.006	0.01	0.017	0.02	0.105	0.12	0.012
8	3.05	0.016	0.04	0.012	0.03	0.152	6.15	0.031
9	10.02	0.051	0.04	0.013	0.05	0.194	5.18	0.028
10	12.84	0.062	0.05	0.021	0.07	0.217	11.85	0.051
Average	6.12	0.052	0.02	0.09	0.04	0.127	5.26	0.024
Standard deviation	6.01	0.050	0.05	0.08	0.03	0.118	5.14	0.022
Minimum	0.10	0.006	0.01	0.007	0.02	0.112	0.05	0.024
Maximum	12.84	0.062	0.05	0.021	0.07	0.217	11.85	0.051

Source: Authors' calculations

**Table 9:** Effects on employment of Bulgaria

Scenario	Effects on employment in the whole economy		Effects on employment in electronic industry		Effects on employment in machinery industry		Effects on employment in manufacturing industry	
	Jobs	% change	Jobs	% change	Jobs	% change	Jobs	% change
2	124	0.004	4	0.002	12	0.007	11	0.001
3	134	0.005	6	0.003	28	0.009	31	0.015
4	178	0.009	4	0.002	26	0.009	48	0.021
5	215	0.012	7	0.003	12	0.004	53	0.027
7	184	0.010	9	0.005	32	0.002	15	0.009
8	241	0.019	7	0.004	16	0.0011	24	0.023
9	259	0.021	7	0.004	37	0.024	19	0.009
10	312	0.027	11	0.006	45	0.029	145	0.035
Average	172	0.011	4	0.002	23	0.021	28	0.016
Standard deviation	89	0.003	2	0.001	14	0.009	13	0.013
Minimum	124	0.004	4	0.002	12	0.007	11	0.001
Maximum	312	0.027	9	0.006	45	0.029	59	0.035

Source: Authors' calculations

Creating new jobs, boosting productivity are issues that are researched and analyzed when analyzing changes in the ratio of exported goods. The results of the MIOM and the effects on employment of CETA ratification are set out in the following table. The ratification of the CETA and the liberalization of duties and customs duties will help to create jobs in the 124-312 range.

When comparing the results of CETA's impact on value added, export and employment, we reveal that on value added and export, CETA will impact on the manufacturing industry mainly. When we report the influence on the employment, it should be mentioned that new jobs will be created in the whole economy. In scenario 2, a constant increase in the volume of exports by 0.05% leads to nearly 124 new jobs, of which only 11 will be created in the export-dominant manufacturing sector for Canada. In optimistic options 7 and 10, high labor productivity is balanced by relatively higher elasticity to changes in duty rates. Taking all the scenarios into account, we can summarize that the average total employment will increase by more than 172 jobs in Bulgaria, which in turn, relative to the labor market, represents less than 0.01% of the total current employment.

## 5. CONCLUSION

The current study reveals the influence arising from the conclusion of CETA on the Bulgarian economy with an emphasis on electronic industry, machinery industry and manufacturing. We estimate both – the direct and indirect effects on Bulgaria's exports, imports, value added and employment. In order to estimate the influence, we apply the multi-regional input-output model. It is proved that CETA will have a low but positive impact on the Bulgarian economy. After constructing different scenarios of development, we prove that the influence of CETA on the Bulgarian economy will amount to 0.010% GDP. The average total employment will be increased by more than 172 jobs in Bulgaria, which in turn, relative to the labor market, represents less than 0.01% of the total employment. Even that we report positive effects of CETA ratification on the Bulgarian economy, we should notify that they are too weak.

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# PROTECTION OF CREDITORS' RIGHTS IN THE CONTEXT OF AN EVOLVING INVESTMENT ENVIRONMENT UNDER EU LAW

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DOI:

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**Abstract:** *In the post-global economic and financial crisis, Europe is suffering from significantly low levels of investment. This applies both to national level in the individual Member States and to those with a supranational scope. For this reason, the EC tried to stimulate the development of any investment initiative through the Juncker Plan, which is based on three pillars: the European Fund for Strategic Investments, the European Investment Advisory Center and the European Investment Projects Portal, and third, improving the business environment by removing regulatory barriers to investment at national and European level. Policies in this direction will continue and build on over the period 2021-2027 through the InvestEU program, which aims to continue to support increased investment, innovation and job creation in Europe. The process of implementation of each such initiative directly affects the individual legal and natural persons as investors who enter different bond relations, which have both national and international dimension. The development of new investment products and instruments would be unthinkable without the Bank's involvement as a major creditor in the implementation of investment projects. This fact shows that it is necessary to examine the legal guarantees for the protection of creditors in these relationships in case of possible threat the debtor to damage the creditor in case of unfavourable development of the respective investment initiative. This paper will justify the significance and the peculiarities of Paul's claim as a means of protecting creditors in the context of a developing EU investment environment and its legal framework. This method of preventing the decline of the asset and / or the increase of the liability of the debtor's property is characterized by extreme persistence over time as a legal institution that originated in the Roman era and has survived to the present without losing its significance.*

**Keywords:** *Creditors' rights, Actio Pauliana, investment, InvestEU, Juncker Plan, Collateral, Fraudulent Misconduct, insolvency, trade law, civil law.*

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## 1. INTRODUCTION: PROBLEM STATEMENT

**A**nnouncement and the subsequent launching of the Juncker Plan implementation by the European Commission puts the development of bond and trade relations between natural and legal persons at Member States and EU level in front of new challenges. On the one hand, the Plan acts as a guarantee to the entities, which are active in civic and trade life, for access to finance for the development of innovative business ideas in the European interest. This, in turn, is an additional incentive for them to participate increasingly active underutilization of funds for large investments over 25 million euros directly to the European Investment Bank Group or at - small projects through credit lines established in cooperation with national and regional banks that know the local markets. On the other hand, it is very important to note that the European Investment Bank does not grant loans in excess of 50% of the required funds for the implementation of a project, which in turn confronts the entities with the challenge of obtaining the funds they need to realize the investment from their own savings or through an additional bank credit. This, in turn, puts national credit institutions in a special position. On the one hand, borrowing less than 25 million euros, national credit institutions are secured partially with funding from the European Fund for Strategic Investment, which creates a need for additional

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collateral, which the credit institutions want from individuals and legal entities to approve the project of idea financing. The incentive effect of the plan on the one hand creates prerequisites for active participation, but from another point of view, it has a deterrent effect, because the credit institution must be additionally secured. So, at micro level, whatever it's the civil status of the investor, the credit institution is a creditor whose interest is trying to as secure as possible.

In addition to this level, in terms of evolving investment environment, it should be considered purely the narrow bond and trade relations on the occasion of the realization of the investment project and its start, which gives rise to multiple bonds and/or commercial relationships either unilateral or bilateral between businesses, which makes it a topical question: By what means the creditor's interest can be protected. No matter which are the parties to the relationship, the arising mechanisms are the same and apply to them since ancient time on. These are so-called personal collateral (surety, solidarity) and real collateral (pledge and mortgage, among them there are other types of unusual collateral (Actio Pauliana and Actio Obliqua). In this article, we will pay attention to the latter type of uncharacteristically collateral, among which Actio Pauliana is of importance. This article focuses on the raised problem through the prism of Bulgarian legislation and some jurisdictions in other Member States, reflecting the practice of Court of Justice of the European Union (CJEU).

## **2. FACTORS WITH POSITIVE AND NEGATIVE EFFECTS ON THE INVESTMENT ENVIRONMENT**

Before we get to the heart of the problem, we will look at some factors at EU level, with an impact on Member States, which have both a positive and a negative impact on the investment environment, and which give rise to an increasingly comprehensive application of these security mechanisms, as follows:

### **2.1. The World Financial Crisis 2007-2008**

The EU has faced many difficulties in its historical development. We must not forget that it was the creation of the '*sui generis*' EC, which subsequently gave birth to the EU as a phoenix from the ashes in the period immediately after World War II. The path of this creation called the EU, which is neither an international organization or federation is dotted with tumultuous since its inception which are as political as economic ones. From the union of several Western European countries, the EU has grown to Union of 28 countries till 2016, which share values and ideas, are individual countries as sovereignty and separately functioning economies. It was not an easy period adapting the individual economies of the Member States, so that to make the EU an independent political and economic factor on the international stage. In addition to their individual crises at national level, each Member State has been parallel to those at supranational level. One such crisis is the 2007–2008 World Financial Crisis, which economists see as even heavier than the Great Depression in the first half of the 20th century. As a result of the financial crisis, stock markets collapsed, key sectors for the development of the economy, as the banking is threatened by a serious collapse, the population significantly impoverished. Of course, from the view of the present one of the main reasons mentioned as the first causative agent of this crisis is the large relative share of over-indebted borrowers who cannot repay their mortgage loans. This, in turn, led to a collapse in banking systems globally, to numerous bankruptcies of credit institutions. This global crisis is also fundamental to the development of the debt crisis in Europe and known as the Euro crisis and especially to the Member States participating in the eurozone. As a combination of a public debt crisis, a banking crisis and a growth and competitiveness crisis, it confronts old Member States like Italy and Greece on the verge of bankruptcy.



## 2.2. Brexit and the migration crisis

In determining the factors influencing the EU's investment environment, we should also consider the first opt-out of membership in the EU's history. After a held referendum in Great Britain on 23 June 2016, the United Kingdom faced the dilemma of staying a member of the EU or leaving it, and so with more than half of the votes of its population, the English people decided to leave the Union. Formally on 29 March 2017<sup>2</sup> the United Kingdom notified the European Council of its intention to leave the EU and thus triggered Article 50 of the Treaty on European Union. Thus, the EU is entered into a new crisis, but this time a political one that inevitably negatively affects the evolving investment environment in Europe, it has created significant movements in the financial markets and affected the Union's rating on the international stage. Next, we should also mention the ongoing migration crisis in Europe, which was created precisely in this period, which has an impact on the investment environment.

## 2.3. Juncker Plan

It is during this period that the European Commission also announces its investment plan. The idea of Juncker Plan is ingenious and very promising for the EU and its Member States, it gives a lot of positive results, but how would it look through the prism of the political crisis on the occasion of the UK's departure from the EU in 2021 and the nascent health crisis facing Europe and the world on the occasion of a pandemic<sup>3</sup> spreading the Corona virus (COVID19). These challenges whether or not, they face Europe, and in particular any Member State, at the threshold of a severe economic crisis as a result of the health crisis, which will reflect on ultra-micro level as a new debt crisis in the banking sector and separate indebtedness between individual companies in landmark sectors for each state economy. There are expected to be numerous and massive cuts of employees, halt of proceedings, failure of many businesses, which will become insolvent and will stop their payments not only to the state but also to their creditors. In addition, it will reduce consumption and the income and standard of living of the citizens of the European Union will be reduced significantly. People will not be able to cover not only their loans but also their daily needs. This development of the public relations in turn reposes the unfavourable development of many contractual and commercial relationships, namely the failure to comply with obligations under bond and commercial contracts of any kind. This fact enormously will place creditor as a party to a relevant contractual or commercial relationship in a disadvantaged position. Precisely and for this reason I realized the idea to write this article, which is rooted in my perception to highlight the strength and characteristics of collateral as a means of protecting the rights of creditors and, in particular, the legal institute of Actio Pauliana as a mechanism of protection of creditors either in civil or commercial law and to present its peculiarities in Bulgarian law and its manifestations in the case law of the European Court of Justice.

Despite these economic gaps in front of the EU, as a result of the euro crisis, thanks to policies related to the monitoring of government deficits and Member States 'debt levels', Europe has been able to stabilise. This is the challenge for the strategic solution of these problems not only at the macro level, but also on micro. It is precisely and for this reason that the European leaders are still distrustful as a result of the crisis, but convinced that the life of the European economy must be "breathe", to create an environment conducive to investment, the European Commission is broadcasting its strategic investment plan „Juncker". However, in the mind of every layman arises the question: How will this happen? *Firstly*, European politicians see the realisation of this plan in

<sup>2</sup> <https://eur-lex.europa.eu/content/news/Brexit-UK-withdrawal-from-the-eu.html?locale=en>

<sup>3</sup> <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

three pillars the first, to provide the opportunity to develop strategic investments that are innovative and rapidly liquid, which is expressed in the creation of a European Fund for Strategic Investments, *the second* to provide technical assistance to investors and *the third*, which is primarily the prerogative of each Member State to minimize regulatory requirements in national legislation in order to promote the development of investment and make the EU an investment oasis.

Here should also be mentioned the legal basis of the plan of the name and this is article 309 TFEU<sup>4</sup>, which proclaims the main function of the European Investment Bank to contribute, through capital markets or its own resources, to the stable development of the internal market. In this article, we may also find a provision that tells us that the European Investment Bank facilitates through loans and guarantees the financing of projects in all. In its article 16 of protocol 5 on the Statute of the European Investment Bank, which is an integral part of TFEU<sup>5</sup>, the European legislator clearly gives an understanding that the European Investment Bank provides its members, in the face of Member States or private or public enterprises, with funding in the form of loans and guarantees for investments within the territories of the Member States. Paragraph 2 of article 16 also mentions the requirement for the presence of other sources of financing under the conditions of crediting, from which we can deduce that the Bank does not give 100% investment funding.

The achievement of a significantly stable growing investment environment in the EU during the stabilisation period can be found in the implementation of article 206 of the TFEU<sup>6</sup> on the establishment of the customs union, where in order to achieve the harmonious development of world trade, the gradual abolition of restrictions on international exchange and foreign direct investment is achieved. In pursuance of this provision of EU primary law through several investment regulations<sup>7</sup> connected with the smooth transition from the current system of bilateral investment agreements between EU countries and third countries to a system whereby these agreements are negotiated by the European Commission.

Next, the positive development and creation of a favourable investment climate in Europe also provides EU policy for the conclusion of the so-called EU trade agreements, the main purpose of which is the promotion of trade (argument art. 207 TFEU)<sup>8</sup>. In this context, in May 2018, the Council of Ministers adopted conclusions on the negotiation and conclusion of trade agreements, which set out the basic principles that will be based on the Council's approach to trade negotiations in the future. One of the main issues is the intention of the European Commission to recommend splitting into separate agreements the provisions relating to investment and other trade provisions and the role of the Council in negotiations.

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<sup>4</sup> CONSOLIDATED VERSION OF THE TREATY ON THE FUNCTIONING OF THE EUROPEAN UNION, ELI: [http://data.europa.eu/eli/treaty/tfeu\\_2012/oj](http://data.europa.eu/eli/treaty/tfeu_2012/oj)

<sup>5</sup> Supra note 4

<sup>6</sup> Supra note 4

<sup>7</sup> Regulation (EU) No 1219/2012 of the European Parliament and of the Council of 12 December 2012 establishing transitional arrangements for bilateral investment agreements between Member States and third countries, ELI: <http://data.europa.eu/eli/reg/2012/1219/oj>;

Regulation (EU) No 912/2014 of the European Parliament and of the Council of 23 July 2014 establishing a framework for managing financial responsibility linked to investor-to-state dispute settlement tribunals established by international agreements to which the European Union is a party, ELI: <http://data.europa.eu/eli/reg/2014/912/oj>;

Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers, ELI: <http://data.europa.eu/eli/reg/2011/182/oj>;

<sup>8</sup> Supra note 4

To sum up, in line with the EU's work on the development of international relations in the field of trade and investment, it should be stressed that the realisation of the strategic idea of the Commission „Juncker” to provide funds in the form of loans for the realization of innovative ideas is very well entered. However, the implementation of the plan is unthinkable without the involvement of the bank sector, as the main accelerator of fast liquid funds, which can give life to innovative entrepreneurial ideas at European level. That is why, as a lesson from the bitter experience of the world economic crisis, this European Fund for Strategic Investments is being created, as part of the EU budget, which aims to play the role of a guarantee for the European Investment Bank Group in a possible ‘first loss’. Thus, in the form of loans, investors realise their ideas and push the European economy up. This mechanism of action seems to take greater success than the grant financing of large, small and medium-sized enterprises through the financing of business under the various European programmes. It is precisely and for this reason that after the enviable success of this initiative in his State of the Union speech<sup>9</sup>, the President of the European Commission then Jean Claude Juncker announces his proposal for an extension of the European Fund for Strategic Investments duration to 2020, providing that the investments will reach at least 500 billion euros.

#### **2.4. Mechanisms at national level taken to reinforce the investment environment**

In pursuance of the third pillar of the Juncker plan to improve the investment environment, each Member State should make steps to take measures to strengthen investment at national level. Republic of Bulgaria is one of the first countries in the EU, which prepares its own action plan, in which 118 measures<sup>10</sup> are identified, which address the main problems in the investment environment at the level of Bulgaria. These measures are related to the amendment of nearly 20 legislative acts at national level, which are aimed at administrative facilitation of investors, such as terms in the construction of the leading technical infrastructure and the construction of investment sites that are being worked on. Some of the main legislative acts in the Bulgarian legislation, which are relevant to the investments and have undergone amendments during this period are: the Law on promotion of investments and the rules for its implementation, setting out the conditions and procedures for encouraging investments in the Republic of Bulgaria and the activities of the public authorities in this field, The Corporate Income Tax Act, which has separate provisions related to tax concessions them, the Spatial Planning Act, which contains provisions for the settlement of investment design and realization of spatial plans by investors, certified under the law for promotion of investments, Law on energy, governing special rules related to investments in the energy sector, the Concessions Act, as well as their rules of application.

As a result of the experience gained and the results achieved <sup>11</sup>( in 2010, nearly 88% of the total EIB funds amounting to EUR 72 billion are invested in projects in the EU). It is foreseen that this undertaking will continue in the next multiannual financial framework 2020-2027 in the form of the InvestEU programme, which foresees that additional investments of at least EUR 650 billion are to be mobilised in the next long-term EU budget. But how will the looming new economic crisis affect the implementation of the forthcoming plan? This is a question, whose answer, I think, is that it will have an extremely negative impact as this is not a pure economic crisis, but that caused by several other health and the social crises. Not only of the EU, but of the whole world will require a longer period to recover from the damage that will cause the looming new world crisis.

<sup>9</sup> [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_16\\_3002](https://ec.europa.eu/commission/presscorner/detail/en/IP_16_3002)

<sup>10</sup> Official website of Bulgarian Ministry of Finance <https://www.minfin.bg/bg/1199>

<sup>11</sup> Official brochure of the Group of the European Investment Bank [https://www.eib.org/attachments/country/the\\_eib\\_group\\_in\\_bulgaria\\_bg.pdf](https://www.eib.org/attachments/country/the_eib_group_in_bulgaria_bg.pdf)

In this line of thought in a developing Investment environment more and more social relations in the field of credit (Credit Institution- natural persons relationships or Legal persons/investors) will develop. This fact, on the other hand, makes the examination of the additional mechanisms for securing the resources that a credit institution has to realise the relevant business idea beyond the material scope of the European Fund of Structural Investment (EFSI) guarantees and how they would reflect on the credit institution in a position of unsatisfied creditor in the event that a business idea fails.

### **3. OTHER MEANS OF PROTECTING CREDITORS OUTSIDE EFSI GUARANTEES**

As a result of this fluidity at the macro level (EU level, individual Member State level), we should address the problem to the ordinary micro detail- at the level of individual relationships between the simple legal figures of a creditor and a debtor, so that we can be understandable to present them. To all of us who participate actively in a civic and commercial life, the fulfilment of an obligation is the normal development of the legal relationship in which we participate in the contract or trade. However, this does not preclude the possibility for the debtor party not to fulfil. It is for this reason that the right, in order to ensure legal certainty of civic life, governs ways in which creditors' rights are protected independently of the surrounding macroeconomic or political environment. These methods are called collateral. Next comes the question besides a defensive what the function of the collaterals is still. In this direction, we should share the opinion of much of the theory that collateral also has a stimulating credit function<sup>12</sup>. This function of collateral is expressed in the willingness of creditors to allocate money to the debtor. An unsecured creditor will not have such a willingness to allocate exemplary loans, because the performance of his claim is not sufficiently guaranteed. This in turn is the ideology of the credit institutions that participate at national level in the implementation of the investment plan. As above-mentioned, it is said that the funds cumulated in the European Fund for Strategic Investments serve as an EU guarantee, which aims to mobilise private investment. Again, the Group of the European Investment Bank (concerning projects above 25 million euro) and the national credit institutions, respectively, did not allocate 100% of funding, but at 50%. This places investors in a position to accumulate the remainder of the percentage of own funds and capital or through additional credit lines and/or instruments. So that the means to protect the creditor in the form of different collateral are applied.

In this line of thought, the Bulgarian legislation has adopted a large part of its legal institutes related to collateral from Roman law, which have made a large part of the European countries from the romance legal circle, too. Although, the Bulgarian legal system is part of the Continental one, Bulgaria cannot boast of a civil Code, which fully regulates the matter of civil law in the country. The legislation is dispersed across several legislative acts depending on the relationship which it governs. Fundamental in Bulgaria in terms of civil and commercial life are the Law on Obligations and Contracts<sup>13</sup> (*Lex generalis*) and the Commercial Act<sup>14</sup> (*Lex specialis*). And so, in our Law on Obligations and Contracts there is chapter 7 of the common part, which governs collateral such as the securitisation of debtor property, the exercise of debtor's rights by the creditor (*Actio Obliqua*), the avoidance action (*Actio Pauliana*), the privileges, the

<sup>12</sup> Kalaidjiev A., *Obligation Law*, Op. cit., p.618, 7<sup>th</sup> Edition, Sofia, Sibi, 2016, ISBN 978-954-730-991-3

<sup>13</sup> Law on Obligations and Contracts (published in Bulgarian State Gazette, 275, issued on 22<sup>nd</sup> of November 1950, entered into force on 1<sup>st</sup> of January 1951, last modified 50, issued on 30<sup>th</sup> of May 2008)

<sup>14</sup> Commercial Act (published in Bulgarian State Gazette, 48, issued on 18<sup>th</sup> of June 1991, entered into force on 1<sup>st</sup> of July 1991, last modified 83, issued on 22<sup>nd</sup> of October 2019)

guarantor, the pledge and the mortgage. Moreover, it should be mentioned that in Bulgarian law there are other institutes known to the world since Roman law which have a protective function, namely the retention right (lien), penalty, deposit and solidarity obligations. On the other hand, the Bulgarian commercial law in part 3, Commercial transactions, although the alternative to apply the rules of the Law on Obligations and Contracts under article 288 of the Commercial Act in special provisions sets out the peculiarities of these institutes, which are characteristic of the relations between traders. Such are the commercial pledge and the commercial retention right (commercial lien). In this regard, it should be noted that the Bulgarian law also knows the special pledge that is governed by a separate legislative act, namely the Pledge law<sup>15</sup>, where the legislature deviates from the perception of the real nature of the legal institute of the pledge. At the same place, it should be mentioned that in comparison with other legislations like Czech Republic<sup>16</sup>, Germany<sup>17</sup>, Estonia<sup>18</sup>, where the matter of bankruptcy is regulated in separate legal acts, in Bulgaria it is contained in part 4, entitled Bankruptcy of the Commercial Act. There are the special provisions governing different hypotheses that protect creditors in the open insolvency proceedings. From Art. 645 to art. 649 of Commercial Act is contained the legal framework of the special preferential claims<sup>19</sup> and the subsidiary application of the Actio Pauliana under art. 135 of the Law of Obligations and Contracts.

Before proceeding to the institute of Actio Pauliana, which is the subject of a more in-depth study in this article, we will make a short distinction of the types of collateral. The doctrine<sup>20</sup> generalized the division of the types of collateral according to the differences of the funds that guarantee the implementation. Based on this criterion, theoretically we divide them into personal and real (in rem). As with the former, we have several persons who guarantee the creditor that his debtor will fulfil his obligation, in the second type this position is occupied by an item (a property law). In practice, creditors prefer tangible collateral that is not tied to the person of an additional individual who secures the creditor's claim because it is not always safe for the person to have the solvency of the individual, for example, for the guarantor. No doubt as a real (in rem) collateral we can be pointed the pledge and the mortgage, from the category of the personal-the guarantor and passive solidarity.

<sup>15</sup> Pledge Law (published in Bulgarian State Gazette, 100, issued on 22<sup>nd</sup> of November 1996, , last modified 102, issued on 31<sup>st</sup> of December 2019)

<sup>16</sup> Insolvency proceedings in the Czech Republic are primarily regulated by Act No 182/2006 on insolvency and insolvency procedures (Zákon č. 182/2006 Sb., o úpadku a způsobech jeho řešení) (the Insolvency Act), supported by Act No 99/1963, the Code of Civil Procedure (Zákon č. 99/1963 Sb., občanský soudní řád).

<sup>Another</sup> important instrument is Act No 312/2006 on insolvency administrators (Zákon č. 312/2006 Sb., o insolvenčních správcích), which (in conjunction with the Insolvency Act) establishes a legal framework for the profession of insolvency practitioner. The current versions of these provisions can be found on the Public Administration Portal (Portál veřejné správy): <https://portal.gov.cz/app/zakony/>.

<sup>17</sup> The law governing insolvency and insolvency proceedings is regulated in Germany by the Insolvency Code (Insolvenzordnung –'InsO'), which entered into force on 1 January 1999. The particularity of the Insolvency Code is that it contains not only procedural, but also substantive provisions. For example, the provisions determining the effects of opening insolvency proceedings are substantive provisions (Sections 80 to 147 of the InsO)

<sup>18</sup> Bankruptcy proceedings are governed by the Bankruptcy Act, the rules covering reorganisation are set out in the Reorganisation Act and the debt restructuring rules are set out in the Debt Restructuring and Debt Protection Act. The Acts are available in Estonian and in English from Estonia's official online publication, Riigi Teataja (State Gazette) (<https://www.riigiteataja.ee/>).

<sup>19</sup> Stefan St., Preferential claims to replenish the bankruptcy estate, Op. cit., p.33, Sofia, Sibi, 2011, ISBN 978-954-730-691-2

<sup>20</sup> Kozuharov A., Obligation Law, Op. cit., p.579-580, Sofia, Jurispress, 2002, ISBN 954-632-049-8

All these remedies of creditors are directly applicable, regardless of the environment. While the guarantee under the European Fund for Strategic Investments applies only during the period of implementation of the Juncker plan, the other collateral can serve as collateral for the creditor without regard to a certain programming period.

This article is aimed at one of the remedies for the protection of the rights of the creditor, namely the Actio Paulina or the so-called in theory and practice, 'revocable claim', it will be given attention in the present work.

### 3.1. Origin and historical development of Actio Pauliana

Actio Pauliana found its origin in the Roman Empire during the time of the law. Around 150-125 BC. a pretor named Paul<sup>21</sup> proclaims the idea of overcoming formalism and the emergence of a law of a personal nature that allows the creditor to annul the debtor's actions with which he deliberately damages him. Although the enigmatic person of the Rector Paul is the basis of great controversy among the romanists now, most of the doctrine maintains its origins in the legal right. It should be noted and that there is also an opinion that the same claim was first introduced by the glossators.<sup>22</sup> At the time of the Roman era Actio Pauliana was manifested in various forms during the various historical periods. It evolved from an ,executive method which gave the creditor the right to sell in slavery the debtor ,, in law, ,allowing the creditor to annul acts committed intentionally by the debtor with the intent to harm him , by directing his claim , against the third party acquiring the disputed property ,.<sup>23</sup> Next centuries the Actio Pauliana is also found in the digestate. It includes the most developed version of Actio Pauliana. It is from this moment that the concept of Actio Pauliana began to develop on the basis of alienation (alienation), the ensuing damage (Eventus Fraudis), Intent (Fraus) and knowledge of disability (participation Fraudis), as the Advocate General DÁMASO RUIZ-JARABO COLOMER very accurately points out in the analysis of his opinion in case C-339/07. Another opinion of the same advocate General is that the classical period is Two methods exist to protect the creditor against damage from the debtor: restitutio in integrum ob fraudem and Interdictum fraudatorium. The first method marks a very great similarity with the claims for the filling of the bankruptcy estate in insolvency proceedings. This claim is led by the so-called Curator Bonorum Manager of the property of the insolvent debtor, who nowadays equated with the figure insolvency practitioner. The first means of protection gave the right of the general manager of property to ask the relevant magistrate to order the return of the transferred with intent to damage assets back to the debtor's humidor. The second claim already constitutes protection for a creditor who could have requested the relevant magistrate to issue an order (Interdictum) by virtue of which the transferred assets in the debtor's patrimonium are returned with the intent to satisfy the injured creditor.

Already in the time of the Justinian code these two methods merge into one action, namely Pauliana. Thus, the three defining signs of that action are defined, namely: the existence of actual damage at the time of the claim, the debtor's actions with the intent of damaging the creditor and the bad faith of the third party, which is knew for harmful debtor action.

<sup>21</sup> Kalaidjiev A., *Obligation Law*, Op. cit., p.628, 7th Edition, Sofia, Sibi, 2016, ISBN 978-954-730-991-3

<sup>22</sup> Supra note 21

<sup>23</sup> OPINION OF ADVOCATE GENERAL RUIZ-JARABO COLOMER, delivered on 16 October 2008, Seagon, C-339/07, ECLI:EU:C:2008:575, p.25-30 under Judgement of the European Court of Justice ( First Chamber), issued on 12 February 2009, Seagon, C-339/07, ECLI:EU:C:2009:83

On the basis of the exhibitions, historical analysis should be inferred, that it should be noted the foresight and genius of the Roman jurist and, as this legal institute has resisted the development of public relations for more than 2000 years, albeit with slight amendments and specificities it has been recycled and adopted in the modern legislations of the majority of Member States of the EU, from which are France, Germany, Poland.

### 3.2. Actio Pauliana in Bulgarian law

Actio Pauliana is governed by art. 135 by the Bulgarian Law on Obligations and Contracts (LOC) and is expressed in the creditor's ability to declare invalid in respect of him the acts which the debtor has taken in order to harm the creditor interest. Although it is meant by the term 'claim', it is settled as a self-substantive right of the creditor. In legal literature, there is a dispute about the nature of that right, whether it has a character or a contractual nature. According to the opinion of prof. Lyuben Dikov<sup>24</sup> the creditor's entitlement is of a material nature on the ground that it can be exercised both against the debtor and against all third parties. According to other authors<sup>25</sup>, this right of the creditor has the character of a claim because it is directed to a specific person and it is the debtor. However, there is no shortage of allegations and that the claim as a right has a mixed character. There is a fourth opinion<sup>26</sup>, which denies all other opinions, motivated by the understanding that the law under article 135 of the Law of Obligations and Contracts has a secondary character, that is subject to the existence and the emergence of another relationship. The motive for the maintenance of the present opinion is rooted in the fact that the law is not directed erga omnes and that its exercise does not require assistance to the debtor party. That last understanding should be shared by me and based on the preliminary ruling nature of the harmful action. Furthermore, this right is from the category of material non-proprietary rights which are transformative, because the creditor unilaterally without requiring conduct by the debtor can exercise his right.<sup>27</sup>

In order to be able to identify the nature and distinguish it from the remaining collateral, it is necessary to indicate under what circumstances that right arises, so we must determine its factual composition.

*The first prerequisite* to be fulfilled is that there must be a claim to make the creditor's quality of the injured party conditional. In the Bulgarian case-law, some categories of creditors who have been legitimated to pursue this claim, namely the bill of the assignee, the purchaser of the preliminary contract<sup>28</sup>, have established the two interpretative decisions<sup>29</sup>. That creditor claim should be actual, this means that it is not void and it is lawful in the legal peace. Likewise, this right to claim must not be barred and terminated on any ground. It should be noted that it is not necessary to prove the right to claim to be proved by an enforceable decision, but it is enough that the claim is receivable<sup>30</sup>.

*The second element* of the actual composition is the harmful action of the debtor. It should be noted here that this action is a kind of a voluntary act, regardless of the nature of the action or transaction. As in the legal doctrine, it is head set the opinion that if the action is a transaction,

<sup>24</sup> Dikov I., Civil Law Course. Obligation Law, Common part, Volume III, Op. cit., p.43, Sofia, 1934

<sup>25</sup> Aubry C., C. Rau. Op.cit., p.138; Planiol, M. Op.cit., p.191

<sup>26</sup> Kalaidjiev A., Obligation Law, Op. cit., p.629, 7th Edition, Sofia, Sibi, 2016, ISBN 978-954-730-991-3

<sup>27</sup> See supra note 26

<sup>28</sup> Judgement 31-2006-II-Civil Chamber of the Bulgarian Supreme Court

<sup>29</sup> Judgement 197-2014-IV-Civil Chamber of the Bulgarian Supreme Court

<sup>30</sup> Judgement 328-2010-III-Civil Chamber of the Bulgarian Supreme Court and Judgement 423-2000-V-Civil Chamber of the Bulgarian Supreme Court

it can be unilateral or other, repayable or gratuitous, stating that the transaction should be a consideration, that is to say, to have an exchange of goods. It is important that the existence of damage to the creditor is it is an objective fact which is not determined either by the creditor's assessment or by the debtor's discretion, but is a causal relationship.<sup>31</sup> There is always a disability when the creditor's ability to meet the debtor's assets is reduced. If the debtor tries to reduce his property, there is also a disability. In the Bulgarian case-law is determined that, if, by its actions, the debtor has attempted to hinder the satisfaction of the creditor also has a disability. In this direction the case-law says that there is a hindrance to the creditor's satisfaction when the debtor sells immovable property by concealing the sale price<sup>32</sup>.

**The third prerequisite** is subjective, and its elements differ depending on whether the harmful action was either for consideration or free of charge. Art. 135, par. 1, sentence 1 of the Law of Obligations and Contracts tells us that when the transaction is a grant, it is necessary for the debtor to be aware of the disability, meaning that it is sufficient to have an intention for damage rather than fraud. The latter is not an element of the actual composition of the law under art. 135 of the LOC, as under French law (fraudulent transaction). However, where the harmful action is a consideration, it is necessary, in addition to the debtor's intention to damage the creditor and the knowledge there of, by the third party (per argumentum of article 135, par. 1, p. 2 of LOC). Of Course, the burden of proving the knowledge of disability rests with the creditor. The knowledge of disability in article 135, par. 2 of the LOC may indicate the existence of a rebuttable through the event, which makes it clear that until proven to the contrary, the third party's knowledge is presumed if it is a spouse, descending or ascending, brother or sister of the debtor. Under that provision, the knowledge of the debtor is also presumed.

From a practical point of view, it is of interest rather what happens after the court decides on the claim in favour of the creditor. The point is that the debtor's action is declared void only in respect of the creditor. The exercise of claim under art. 135 LOC does not entitle the creditor to dispose of the rights of the action under attack, (a) he may make enforcement of the rights subject to the declared invalid action<sup>33</sup>. A very important element is the effect of this action from the moment when it is occurring is attested by the entry of the application for a declaration of invalidity (art. 135, para. 1, last sentence LOC).

In conclusion, the main function of Actio Pauliana is to protect the creditor against valid legal acts with which his debtor frustrates or hampers the satisfaction of his claim.<sup>34</sup>

### 3.3. Actio Pauliana in the CJEU's case-law:

In the case-law of the CJEU, the Actio Pauliana has been examined in different situations in several cases, in addition to the European dimension of that action, the characterisation and peculiarity of the Actio Pauliana in the relevant national legislation is also given in court rulings.

<sup>31</sup> Kalaidjiev A., Obligation Law, Op. cit., p.634, 7th Edition, Sofia, Sibi, 2016, ISBN 978-954-730-991-3

<sup>32</sup> Judgement 407-2014-II-Civil Chamber of the Bulgarian Supreme Court

<sup>33</sup> Kalaidjiev A., Obligation Law, Op. cit., p.640, 7th Edition, Sofia, Sibi, 2016, ISBN 978-954-730-991-3

<sup>34</sup> Ruschev, Iv., Team of Authors Securities in material and procedural private law, Op. cit., p.330, Sofia, Publisher Trud i Pravo, 2018, ISBN 978-954-608-255-8



### 3.4. First case: C-394/18<sup>35</sup>

In that judgment, the Court of Justice render a decision under the preliminary ruling procedure. The dispute in the case is between I.G.I. Srl and Maria Grazia Cicenia, Mario Di Pierro, Salvatore de Vito, Antonio Raffaele appeals. Court of Naples, Italy made a reference for a preliminary ruling, which consists in the fact that, by Notarial Act of 16 September 2009 Costruzioni Ing. G. Iandolo Srl transferred a part of his property to I.G.I., established for that purpose by the same notarial deed. By that action, the applicants consider that there is a detrimental effect on them which the company Costruzioni Ing. G. Iandolo remains the owner of low-value landed property and, as a result of the division, has lost much of its property. This fact has given rise to the plea of Ms Cicenia, Mr Di Pierro, Mr De Vito and Mr Raffaele to submit a complaint to the court of First instance, Avellino Italia with the legal bases of art. 2901 of the Italian Civil Code. On this basis, they have claimed declaration of invalidity of the act of separation. The court of first instance upheld the creditors Actio Pauliana, but the defendant appealed on the ground that the action is unfounded, since the objection under article 2503 of the Civil Code is the only legal remedy available to creditors of the companies involved in a division and that, where no objection is filed, the effects of the division become definitive in respect of the creditors". They also point out that the legal basis on which they are based, namely the Art. 2504 by the Italian Civil Code in its essence transposes articles 12 and 19 of the Sixth Directive. On the other hand, the Italian Court of Appeal justifies the need for a reference for a preliminary ruling that, under article 19 of the Sixth Directive, which lays down rules on the nullity of a division. This article provides that invalidity cannot be declared after the division is entered in the trade register. In that regard, there were two strands in Italian legal literature on whether Actio Pauliana was admissible. One is in favour of admissibility on the ground that the debtor's assets serve as a comprehensive guarantee to the creditor. In the opposite direction is the second opinion in the Italian case-law, the creditors of the company being divided must not be allowed to take account of the objective of the Sixth Directive, which is to make the effects of the division definitive and irreversible to creditors within a short period of time in order to protect the interests of the multiple parties affected by the division, other than the creditors of the company being divided.

In its decision the CJEU's judicial composition, after analysing the legal framework at national and European level, stipulates the Court emphasised that article 12 of the Sixth directive provided for a minimum system of protection of the interests of the creditors of the company being divided as regards the claims which arose before the time when the splitting plan was published and whose maturity had not occurred at that time. Member States may therefore provide for additional means of redress.<sup>36</sup> , , As the formation here distinguishes between nullity under article 12 of the Directive, which, as a law institute, deletes the effects of the transaction as if they had not existed, whereas the Actio Pauliana permits the debtor's actions to be declared to be unenforceable as to the division and, in particular, the transfer of the properties referred to in the Act of Division. In this sense is the thesis of assoc. prof. T. Iosifova on the enforceability and the external effects of the contracts in its monographic work<sup>37</sup>.

This work of the CJEU can be defined as a sign of the determination of the essence of Actio Pauliana as an additional non-characteristic method of defending the rights of the creditor,

<sup>35</sup> Judgement of the European Court of Justice (Second Chamber) of 30 January 2020, I.G.I. Srl v Maria Grazia Cicenia and Others, C-394/18, ECLI:EU:C:2020:56

<sup>36</sup> Judgement of the European Court of Justice (Second Chamber) of 30 January 2020, I.G.I. Srl v Maria Grazia Cicenia and Others, C-394/18, ECLI:EU:C:2020:56

<sup>37</sup> Iosifova, T., Effects of the contract upon persons, Op. cit., p.121-p.146, Sofia, Sibi, 2019, ISBN 978-619-226-106-1

which has a separate application against the actions for the realisation of the protective mechanism of the other collateral.

### 3.5. The second case: C-3379/17<sup>38</sup>

Feniks v. Azteca is related to the determination of the international jurisdiction of the dispute as to whether it falls within the specific jurisdiction of Regulation 1215/2012<sup>39</sup> of article 7 (1) (a) on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters or in that of Regulation 1346/2000<sup>40</sup> on insolvency.

The dispute was between Feniks sp. z o.o. and Azteca Products & SERVICES SL (,Azteca ,) on the occasion of a contract for the sale of immovable property which was concluded by Azteca and the debtor of Feniks and which, according to Feniks, damaged his rights. Here is a preliminary ruling legal dispute develops before the Polish court. The company Coliseum 2101 sp. z o.o. (,The Coliseum'), which is based in Poland, concluded a construction contract as a main contractor with the Polish company Feniks, in its capacity as investor, as the subject-matter of the contract was the implementation of an investment project in Gdansk (Poland). For the purposes of contract performance, Coliseum concludes several subcontracting agreements. As Coliseum does not fulfil its obligations to some of the subcontractors, Feniks is obliged to pay them because of the provisions of the Polish Code of Joint liability of the investor.

The question arises as to the international jurisdiction that the contracts were concluded in Szczecin (Poland) and the Coliseum sells to Azteca company, which is based in Alcora (Spain), its immovable property located in Szczecin (Poland). Thus Feniks brought an action on the basis of article 527 et seq. of the Civil Code before the referring court — Sąd Okręgowy W Szczecinie (District Court, Szczecin, Poland), with the defendant Azteca, requesting that the sale contract referred to in the preceding paragraph should be declared invalid because it was concluded by the debtor in order to damage it.

In that judgment, the Court of Justice was consistent in its analysis that Actio Paulina found its ground in the right to claim, the creditor's contractual right towards the debtor, and aimed to protect the possible right of the creditor to be satisfied with the debtor's assets.<sup>41</sup>

That case-law of the CJEU emphasises the nature and substance of Actio Pauliana, albeit through the prism of any national legislation of a Member State of the EU.

In the case-law of the CJEU's it may be also indicated the other cases, which in turn are related to the bringing of avoidance actions in insolvency proceedings like C-722/17–Reitbauer<sup>42</sup> and

<sup>38</sup> Judgement of the European Court of Justice (Second Chamber) of 4 October 2018, I.G.I. Srl v Maria Grazia Cicienia and Others, C-337/17, ECLI:EU:C:2018:805

<sup>39</sup> Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, ELI: <http://data.europa.eu/eli/reg/2012/1215/oj>

<sup>40</sup> Council regulation (EC) No 1346/2000 of 29 May 2000 on insolvency proceedings, No longer in force, Date of end of validity: 25/06/2017; Repealed by 32015R0848. Latest consolidated version: 12/10/2016, ELI: <http://data.europa.eu/eli/reg/2000/1346/oj>

<sup>41</sup> Judgments of 10 January 1990, Reichert and Kockler, C-115/88, EU: C: 1990:3, paragraph 12, and of 26 March 1992, Reichert and Kockler, C-261/90, EU: C: 1992:149, paragraph 17

<sup>42</sup> Judgment of the Court (First Chamber) of 10 July 2019, Norbert Reitbauer and Others v Enrico Casamassima, C-722/17, ECLI:EU:C:2019:577

C-339/07- Seagon<sup>43</sup>. Here is the place to mention that Bulgaria has also made a reference for a preliminary ruling to the CJEU on matters relating to the international jurisdiction of a dispute concerning an action for annulment brought in insolvency proceedings in case C-296/17<sup>44</sup>.

Finally, either way, whether the investment environment will develop or not preconditions for realization of this institute of law will have, but the question is what will be the intensity of the utilization of this mechanism. Precisely for this reason, in this article, we analyse in the current paper the circumstances in which it can be used, which are its prerequisites, what features it has in comparison with other institutes, in order to be able to conclude on what its possible practical application is.

#### 4. CONCLUSION

In conclusion, it should be said that whether the economic environment the EU is conducive to the development of investments of a different nature or not standard means of protecting creditors in national legislations with repercussions in the jurisprudence of the CJEU, will continue to exist and be amended only in the light of the development of public relations that are directly influenced by factors such as past and future crises of a different nature. However, in front of EU stands another problem: Will the European economy prevail the obstacles, will the EU's slashing power to become one of the world's leading actors in the global arena continue ahead or it will deepen the political crisis of trust between founding Member States on the example of United Kingdom or not? In one we must be convinced that the more secured a creditor is the greater its willingness to make funds (credit) investors (natural or legal persons) to realize different investment ventures. This, in turn, positively influences and increases the investment activity on the territory of the European Union.

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<sup>43</sup> Judgment of the Court (First Chamber) of 12 February 2009, Christopher Seagon v Deko Marty Belgium NV., C-339/07, ECLI:EU:C:2009:83

<sup>44</sup> Judgment of the Court (Fourth Chamber) of 14 November 2018, Wiemer & Trachte GmbH v. Zhan Oved Tadzher, C-296/17, ECLI:EU:C:2018:902



# INNOVATION IN AGRICULTURE AND SUSTAINABLE DEVELOPMENT

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**Abstract:** *The rapid development of individual countries often has unprecedented environmental consequences. This is why more and more innovations are being used to ensure, in addition to economic development, the preservation of environmental quality. In addition to transport and industry, agriculture is an important environmental factor. There are many studies in the literature dealing with the relationship between agricultural development and sustainable development, as well as the study of the economic and social role of innovation in this field. The paper aims to examine the relationships between innovation in agriculture and sustainable development, based on extensive scientific literature. The results of the research show that agriculture, such as organic agriculture, is one of the interesting solutions for maintaining the principles of sustainable development. Such an innovation, concerning the mode of production in agriculture, can have many positive benefits for sustainable development from both an economic and environmental point of view.*

**Keywords:** *Sustainable development, Innovation, Agriculture, Environmental protection.*

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## 1. INTRODUCTION

Innovation is one of the hallmarks of the modern lifestyle. „Inventing or adapting environmentally desirable processes or products is already part of everyday life for a large majority of firms and, thus, a field of scientific research” (Rennings, 2000, p. 320). It occurs as a direct result of the development of society and conditioned by advances in techniques and technologies. As a result of their implementation, there is an increase in production efficiency and total gross domestic product of the country, as well as a decrease in environmental pollution.

At the level of the national economy, innovation significantly changes the structure of the economy, and therefore plays a decisive role in economic development. On the other hand, at the level of business entities, the benefits are mainly reflected by increasing their competitiveness in the market. In addition, there are other non-economic effects. They are reflected in changing social relationships, production methods, and improving the quality of life of people. The environmental effects of innovation are often emphasized because innovation is precisely linked to the protection and prevention of excessive environmental pollution. Thus, there are economic, environmental and social benefits from the application of innovation in society.

The subject of the research is to define and determine the goals of the concept of sustainable development within the agricultural activity. The work consists of two parts. The first part describes the importance of innovation in agriculture for sustainable development. This section

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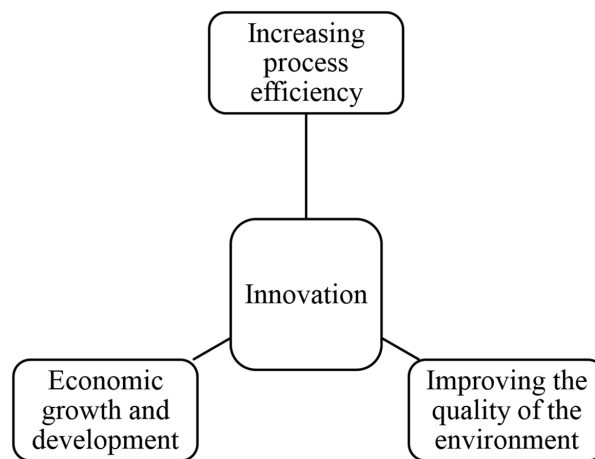
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defines innovation, the concept of sustainable development, and identifies their interlinkage. The second part looks at possible innovations in agriculture, the basic conditions and ways to implement the sustainable development goals, with particular emphasis on organic or ecological agriculture.

## 2. THE IMPORTANCE OF INNOVATION IN AGRICULTURE FOR SUSTAINABLE DEVELOPMENT

„Innovation is a relative dimension because it arises in a social relationship and is determined by comparing the measurable behaviour of two or more individuals, groups, communities, contrasting ‚more innovative‘ with ‚less innovative‘ and ‚non-innovative‘ „ (First-Dilić, 1974, p. 12). Innovations at the micro level enhance the efficiency of the production process, while at the macroeconomic level they have to meet two basic socio-economic goals related to improving the standard of living and tackling environmental pollution, as shown in Figure 1. Therefore, there is a fully justified opinion on the importance of investment in research and development activities.



**Figure 1.** Basic goals of innovation

**Source:** Authors' presentation.

Rennings (2000) states that there are three determinants of innovation. The first are conditioned by technological pressures related to the requirements for increasing energy efficiency and product quality. The second are the result of: market demands that include increased competition, labour costs and changing consumer needs. Finally, the third group of determinants relate to the normative requirements that are associated with existing legal solutions, as well as the expected regulations in the field of ecology and sustainable development.

Agriculture is an economic activity that is significantly sensitive to climate change. Climate change is precisely the result of the application of the current concept of linear economy. „Endangering the environment contributes to further jeopardizing of agricultural production through the impact of the climate change” (Njegomir et al., 2017, p. 1040). On the other hand, it is an important activity where water is used and land degraded (Prokić, 2019). Innovations that promote recycling, reduce waste and the use of materials must be in focus within the conservation principles of the circular economy and sustainable development (Cainelli et al., 2020).

„Until a few decades ago, the concept of a circular economy was not applicable due to the fact that technology could not support his ideas” (Radivojević, 2018, p. 38). Therefore, there is a jus-

tifiable view that innovation is one of the major drivers of the circular economy (closely linked to key elements of sustainable development). In fact, there are two primary goals of innovation related to circular economy and sustainable development: introducing regenerative circular systems and reducing the dependence of economic growth on increased use of non-renewable materials and environmental degradation (Brown et al., 2019).

Innovation in agriculture is of paramount importance, especially in economies that have a higher relative share of agriculture in the production of gross domestic product. Namely, agriculture is the source of many environmental problems. Particularly, its negative effects are manifested in less developed countries due to the presence of dirty technologies, uncontrolled or inadequate agro-technical (chemical) measures, as well as energy sources that are bad for air quality and the entire ecosystem and which, after all, lead to global warming. Thus, although it provides food security and dominantly affects the health of the population (which is one of the factors of economic development), agriculture can also cause a deterioration in the quality of life, which is reflected through pollution of land, air and water.

Znaor (1996) points out that sustainable agriculture is characterized by several elements:

- Ability to maintain yields without increasing inputs,
- Relying on renewable resources and energy sources without endangering natural resources,
- High productivity and stability of production value,
- Cost-effectiveness,
- Using of eco-technology,
- Production of high quality and diversified products.

Agricultural innovation, linked to the objectives of the sustainable development concept, can be mechanical and chemical. Thus, within sustainable agriculture, there are mechanical innovations related to the use of new forms of energy in food production (Đekić, 2010), such as biofuels (biogas and biodiesel) and biomass (where bio-waste is used for fuel production), wind energy and solar energy. These energy products significantly reduce the use of conventional non-renewable energy sources. The use of microbial fertilizers is most often emphasized through the so-called chemical innovations in agriculture.

On the road to the EU, it is necessary to strengthen the infrastructure in agriculture of developing countries. For this purpose, significant funds have been provided for the implementation of technologies and practices that are based on the principles of a healthy environment, which will lead to a greening of agriculture and the implementation of the concept of a circular economy. Therefore, it is necessary to define a clear procedure, but also to control the use of resources in agricultural production. It is undoubtedly an economic activity that is an essential pillar of sustainable development, with significant comparative advantages especially in developing countries (Despotović et al., 2019).

### **3. OPPORTUNITIES FOR APPLICATION OF INNOVATION IN AGRICULTURE**

An increased need for innovation, except at the level of the national economy, exists in the agricultural sector. Although there are many problems, most notably the slowness and limitations in the diffusion of new knowledge into agriculture as a traditional sector, since the post-war period there has been an intense application of technology and knowledge (science) to the agri-food sector (Morgan, & Murdoch, 2000).

Innovations in agriculture are determined by the advancement of society, both through the development of science and technology, and with changes in lifestyles. The speed of their adoption is determined by the nature of the farmers themselves, their economic status as well as their age. Thus, some farmers will immediately apply some innovative solutions, while others will wait and decide depending on the experiences of their friends, relatives or neighbours. Other factors include education, risk-taking and the realization of the socioeconomic benefits of applying innovation. The size of farms also plays an important role in deciding on the application of innovation in agriculture. Innovation is mainly done by younger farmers, with a higher level of education but less experience in business, and who come from urban areas and thus contain significantly higher social capital. Therefore, a link must be created between existing manufacturers, and through the exchange of experience or association the aim is to try to overcome their own shortcomings. „The above challenges present a major opportunity for the development of a circular economy using innovative technologies and profitable business practices to address the utilization of agricultural wastes, by-products and co-products” (Toop et al., 2017, p. 77).

Although the environment is a gift of nature, it is rapidly destroyed, leaving with far-reaching consequences (Njegomir et al., 2017). Innovation is often seen as an essential new component of the sustainable development concept. They are closely related not only to the economic, but to all the traditional components of sustainable development (Marković, 2018a). Therefore, in this sense, the development of science and research and development plays an important role. Technological advances in agriculture are closely linked to the breakthrough of innovation in this industry (Diederer et al., 2003). It also supports the goals of the country’s sustainable economic development. In addition, „most agricultural innovations are functionally interconnected, so adopting one allows for adopting other innovations” (First-Dilić, 1974, p. 11). This provides a significant breakthrough in innovation, at once or most often, in mutually dependent phases.

The penetration of information and communication technology and new software solutions in the economy is increasing. Certain technical solutions and innovations also find their application in the field of agriculture. Innovation is changing the way businesses operate, where it seeks to increase competitiveness. They need to use innovation as a means of enhancing the quality of products that comply with the principles of environmental conservation. That is why eco-innovations are of the utmost importance. In this respect, eco-design, which „has made it possible to update the circular business model by including strategies for creating and capturing value through the marketing of products that are more environmentally friendly”, is particularly prominent (Garcia-Muiña et al., 2019, p. 2). Therefore, there is a need for innovation, which in many respects is a key element of the concept of circular economy and sustainable socioeconomic development.

„Organic agriculture is one of the constituent elements of the idea of sustainability” (Puđak, & Božan, 2011, p. 138). Besides, „ecological (organic) agriculture is a social innovation” (Tomaš-Simin, & Janković, 2014, p. 522). This production is based on the use of renewable energy sources, the reduced use of non-renewable energy sources, and the reduced use of chemicals. In this way, innovation ensures the modernization of agriculture. Organic farming in particular requires a high degree of innovation. That is why financial incentives of the state are important for the implementation of organic agriculture, so that the entire burden of protecting ecosystems does not fall on farmers (Tomaš-Simin, & Janković, 2014). This support for agrarian policy can come in a wide range of subsidies to farmers. Thus, agriculture, as the creator of inputs for various forms of manufacturing industry, will make its contribution, while increased production will not mean greater environmental pollution and violation of the principles underlying the concept of sustainable development.



#### 4. FUTURE RESEARCH DIRECTIONS

As the paper is a synthesis of the research to date in this area, future studies should be based on both extending the theoretical scope of the link between innovation in agriculture and sustainable development, and the possibility of applying concrete solutions. In addition, research should also be based on evaluating the efficiency and effectiveness of incentives for organic farming using specific mathematical and quantitative methods based on relevant databases.

#### 5. CONCLUSION

Manufacturing innovation, linked to structural changes in the economy, must ensure both sustainable economic development and sustainable social development. This does not pollute the environment and, in turn, enables the sustainable development of agriculture to be achieved. In addition, it enables new employment in the recycling industry, the opening of new plants and the establishment of businesses, as well as an additional increase in the overall national production and energy savings.

The breakthrough of modern technological solutions in agriculture are significant in order to eradicate world hunger, ensure food security and increase yields. However, along with the increase in production efficiency, environmental problems have arisen, which has led to the emergence of organic farming and innovation that is contributing to the reduction of environmental pollution. Organic agriculture is one of the basic manifestations of sustainable agriculture (Marković, 2018).

The need to reduce production costs, production time or higher yields also exists in agriculture. That is why, in modern conditions, through certain funds or projects, this sector is increasingly supported, especially by individuals who, when starting a business, decide to innovate.

However, in this industry there is great resistance to change, because it includes mainly traditional and older farmers, so this economic activity lags far behind in applying innovation to other sectors of the economy. The role of highly educated people, even though they do not have agricultural experience, is invaluable, as they have more knowledge that can be applied, as well as a wide network of social contacts.

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# THE IMPACT OF SUSTAINABLE DEVELOPMENT ON WAREHOUSING

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**Abstract:** *The sustainable development is very emerging topic in the last two decades. This global trend has implications for the development of warehouse systems and technologies and the purpose of this article is to reveal the impact of sustainable development on green logistics practices in warehouses and the formation of sustainable warehouse systems. For this purpose, a literature reviews of sustainable or “green” warehouse is made. Also, the impact of the warehouse on the environment during the stages of construction and exploitation is researched. Other important issues concern the practices and technologies used in the warehouse to reduce energy consumption and harmful emissions. Last but not least a review of the legislative measures and certification methods for the construction and design of sustainable warehouses is made. In conclusion the guidelines for the state of development of sustainable logistics practices in warehousing in Bulgaria are given.*

**Keywords:** *Sustainable Warehouse, Green Warehouse, Sustainable Logistics Practices.*

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## 1. INTRODUCTION

Beyond doubt, the topic of sustainable development affects all spheres of the economy and becomes a significant international factor in the development of many industries. Setting requirements in the form of legislation and developing measures to reduce harmful effects on the environment through various mechanisms make the topic relevant and important. Global trends are aimed at reducing emissions in all areas of the economy due to their impact on climate change. This trend is global due to the fact that many countries sign international agreements such as the Paris Protocol signed in December 2015, the UN Sustainable Development Goals and others. At national level, many countries also take individual measures to limit their carbon footprint. Although not specifically targeted to warehouses or separate logistic activities, setting such targets affects all areas of the economy and has a direct impact on the supply chain. The topic is becoming more widely used in logistics and supply chain management under different concepts, such as “sustainable” or “green” supply chain management, corporate social responsibility, circular economy and more. Following this global trend, many companies are deepening their focus, not only into operational and economic goals but in addition they begin to consider the environmental and social issues of warehouses. As a result of a literature review Bartolini et al. state that “an increasing interest in sustainability topics within the warehousing literature, where energy saving has been the most frequently studied objective, followed by environmental impact of warehouse buildings, and green warehouse management in general” (Bartolini et al., 2019, p. 243).

## 2. CONCEPT OF SUSTAINABLE WAREHOUSING

According to Ries et al. “amongst others, logistic activities in global supply chains have become a major cause of industrial emissions and the progressing environmental pollution” (Ries et al., 2017). Although a significant amount of logistic-related carbon dioxide emissions is caused by storage and material handling processes in warehouses, prior research mostly focused on the

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transport elements. This thesis is also confirmed by other authors such as Plambeck, who noted that “carbon emissions from storage are often overlooked in many studies at the expense of transport” (Plambeck, 2012). However, there has been increasing attention to sustainable storage processes, leading to many new research findings on the management concepts, technologies and equipment for reducing carbon footprint of warehouses.

The terms “green” and “sustainable” are often used, and usually they are perceived as interchangeable. However, “green” emphasizes the environmental aspects of sustainable development, while “sustainable” covers all its aspects (environmental, economic and social). For this reason, the term “sustainable storage” and “sustainable warehousing” is used in this paper. The concept of sustainable warehousing begins to be distinguished as a separate element in the literature on sustainable supply chain management. McKinnon et al. dedicate a special chapter in their book “Green Logistics” named “Reducing the environmental impact of warehousing”, (McKinnon et al., 2012, p. 173) and Grant et al. devote a chapter called “Sustainable Warehousing” (Grant et al., 2013, p. 77) in their book “Sustainable Logistics and Supply Chain Management”. Although these authors are known in the field of sustainable supply chain management, they do not give a precise definition of “sustainable warehousing”. Their focus is on exploring the impact factors of warehouses on the environment and reducing their harmful effects. However, in the literature, Bartolini et al. provides a definition of the term “green warehousing” as a “managerial concept integrating and implementing environmental friendly operations with the objective of minimizing energy consumption, energy cost and GHG emissions of a warehouse” (Bartolini et al., 2019). However, this definition lacks the social dimension of sustainable development, involving on the one hand employees in the warehouse and, on the other, the impact of warehouses on society. This social aspect might be important for the location of warehouses in areas with different levels of development, the opening of new jobs, safety conditions for workers and more. Similar to the explanation for “green” and “sustainable” a wider definition is given by Malinovska et al. They define “sustainable warehouses as a set of organizational and technological solutions aimed at efficient realization of the warehouse process, while maintaining the highest social standards, minimizing the environmental impact with regard to financial efficiency” (Malinovska et al., 2018). Therefore, when considering the sustainable nature of warehouses, economic, environmental and social impacts must be considered at the same time.

In 2009, the World Economic Forum (2009) issued a report on “Supply Chain Decarbonization - The role of logistics and transport in reducing supply chain carbon emissions”. This report presents emissions from logistical activities, which are estimated at 2,800 mega-tonnes of carbon dioxide or about 6% of all emissions in the economy. Of these, it is estimated that about 12% are from “logistic buildings” identified by the authors as warehouses and sortation facilities. This shows that while transport is responsible for the largest share of carbon emissions in logistics, warehouses also have a significant share of pollution caused by logistics activities in the supply chain.

The following research questions are posed to clarify the causes of the harmful effects of warehouses on the environment and how to reduce them:

- Question 1:** What are the environmental impacts of the warehouse during the construction and operation phase?
- Question 2:** What methods and technologies can be used in the warehouse to reduce the energy consumption and emissions?
- Question 3:** What are the legislative measures for buildings used for warehouses and what standards are used in the design and construction of warehouses?

### **3. THE IMPACT OF THE WAREHOUSE ON THE ENVIRONMENT DURING CONSTRUCTION AND OPERATION PHASE**

Grant et al. consider that the environmental ‘costs’ stem from the construction phase and from the operations. In the construction phase, emissions are caused by the construction materials and the construction processes and other environmental issues are connected with the land use, water, etc. In the operational phase, the energy consumption for lighting, heating, cooling, ventilation, equipment, etc. is taken into account (Grant et al., 2013). They also claim that whereas much of the energy consumption is determined at the design stage of the warehouse, the warehouse’s energy consumption and its environmental impact can also be reduced to some extent later through the installation of energy and water saving technology, for example in updating temperature control or lighting systems. Sustainable elements in warehouse design include renewable energy, use of daylight, control and planning of artificial light used, temperature control of premises, efficient use of water, noise pollution, personnel training, optimization of storage processes, distribution and shipping of stocks, use of transitional rooms to avoid temperature costs when opening and closing doors, etc. Although the two phases are closely related because of the characteristics of the building, which are determined in the design phase, the operation phase of the warehouses will be discussed in more detail, since improvements to existing warehouses may be made after their construction and therefore, that the logistics functions of the warehouse are carried out in the course of its operation. However, “it should be remembered that the overall environmental impact of a warehouse is the sum of all stages of its life cycle” (Menziez, 2011). Although very important decisions in the construction phase are the choice and quality of the input materials in the building, the location of the warehouse (proximity or distance from major transport hubs), the quality of the land used (it is recommended the use of infertile areas away from livelihoods, agricultural areas and areas with high biodiversity) and the construction process (heavy construction equipment that can disrupt surrounding areas is used).

### **4. PRACTICES AND TECHNOLOGIES USED IN THE WAREHOUSE TO REDUCE ENERGY CONSUMPTION AND HARMFUL EMISSIONS**

The main energy consumption in the warehouse is distributed differently depending on its functions for heating, cooling, ventilation, lighting, equipment, etc. In temperature-controlled warehouse the main energy consumption would be for cooling and heating, while in other types of storage the consumption of energy for lighting and equipment may prevail. Carbon Trust is an expert partner for businesses, governments and organizations around the world who is supporting them in realizing ambitious plans for a sustainable, low carbon future and achieving greater resource efficiency. (Carbon Trust, 2019). This organization presents in its report ‘Warehousing and Logistics - Energy Efficiency Opportunities for a Warehousing and Logistics Company’ at the beginning of 2019 important data on the possibilities of reducing energy consumption, which, on the one hand, reduce the environmental impact and, on the other hand, it reduces costs in the long term. According to their research in the warehousing and logistics companies the main energy using systems are, namely: lighting, heating and ventilation, forklifts, cranes and automation, and energy management. Non-refrigerated warehouses operating with legacy lighting solutions can typically reduce electricity costs by 70% by moving to LED, with further savings through heating measures. Of great importance are the area and height of the warehouse, as well as its internal layout design. One of the trends in warehousing is that the warehouses are becoming more automated, which, in addition to the improved efficiency of the facilities, leads to higher energy consumption.

Based on data from several sources, table 1 summarizes the possible methods and technologies in the warehouse that lead to sustainable results in economic, environmental and social aspect. They can be defined also as measures that can be taken in the warehouse during its operational phase (Grant et al., 2013; McKinnon et al., 2012). The table outlines the areas of application of energy-based practices and the possibilities of reducing such consumption.

**Table 1:** Fields of application of energy efficient warehouse practices.

<b>Application fields</b>	<b>Opportunities for reducing energy consumption</b>
<b>Lighting</b>	<ul style="list-style-type: none"> <li>• Replacing inefficient light sources such as metal halide and fluorescent with low energy LED products; these bulbs give less heat and have a longer life.</li> <li>• Reduce the number of luminaires by placing reflectors under the light source.</li> <li>• Roof windows for daylight entry, which reduces the need for artificial light. This light is also better for staff health.</li> <li>• Cleaning of light sources from dust, in order to improve light intensity.</li> <li>• Turn off the lighting in unused areas and turn off the lighting in the presence of sufficient natural daylight.</li> <li>• Installation of sensors for light control.</li> </ul>
<b>Temperature control</b>	<ul style="list-style-type: none"> <li>• Precise zoning of the warehouse with appropriate barriers or insulation depending on temperature differences.</li> <li>• Opening of doors and barriers only when passing.</li> </ul>
<b>Heating systems</b>	<ul style="list-style-type: none"> <li>• Electricity, solid fuels or renewable energy is used.</li> <li>• The loss of heat depends on temperature differences, insulation, ventilation and passage to rooms with different temperatures.</li> <li>• Energy-saving heating systems and connection with ventilation and cooling systems for better temperature control in different zones.</li> </ul>
<b>Control of humidity</b>	<ul style="list-style-type: none"> <li>• Proper zoning is important so that only humidity control of the required area is carried out, as it also increases energy consumption.</li> </ul>
<b>Insulation</b>	<ul style="list-style-type: none"> <li>• The thickness of insulation reduces the temperature loss and therefore also reduces the required energy for constant temperature adjustment.</li> </ul>
<b>Barriers between areas with different temperature conditions</b>	<ul style="list-style-type: none"> <li>• Fast-closing / opening doors;</li> <li>• Sensor opening/closing of doors without human intervention.</li> </ul>
<b>Ventilation</b>	<ul style="list-style-type: none"> <li>• Natural and mechanical ventilation may be used.</li> <li>• Particularly important for the quality of the air. It is important for temperature equalization at high warehouses.</li> <li>• Use of heat from the cooling process for heating through ventilation system.</li> </ul>
<b>Energy efficient handling and storage equipment</b>	<ul style="list-style-type: none"> <li>• Improvements in battery technology, better battery energy efficiency and faster charging modes.</li> <li>• Optimized, reduced or shorter routes of handling equipment in the warehouse through warehouse management systems (WMS)</li> <li>• Extending the working hours of the warehouse to avoid peak hours and the accumulation of vehicles for loading.</li> </ul>
<b>Water consumption</b>	<ul style="list-style-type: none"> <li>• Used for worker's needs, cleaning the warehouse lorries and in the processing of goods, etc.,</li> <li>• Large roof surface can be used for harvesting rainwater and use it for warehouse needs.</li> <li>• Cleaning and filtration systems for purification of water used.</li> </ul>
<b>Energy production within the warehouse</b>	<ul style="list-style-type: none"> <li>• Wind turbines, solar panels, residual energy recovery, kinetic energy.</li> </ul>

Source: Adapted from Grant and McKinnon

On the one hand, these practices for reducing the negative effects on the environment lead to positive environmental results, and on the other hand, financial investments are needed to achieve them. In the short term, investments can be significant, especially in the overall renovation of an existing warehouse, but in the long term, these environmental practices also lead to economic benefits for businesses by reducing energy consumption costs.

Another important element in the technologies reducing energy consumption and harmful emissions used in the warehouse is the so-called “green energy”. According to McKinnon, “green energy” can be defined as the generation of energy from a number of low carbon renewables near or at the site of use (McKinnon, 2012). As the main sources of such energy he identifies biomass (sawdust or other waste), wind and solar; recovered technological waste energy, such as heat from refrigeration installations or air compressors; recovered kinetic energy. The use of green energy can significantly improve the carbon footprint of the warehouse activity, and the full use of green energy sources can lead to zero carbon emissions. Such warehouses and green building already exist and attend more and more attention such as the European Logistics Campus of Nike in Netherlands, etc.

In addition to energy consumption in the warehouse, it is important to note that the warehousing activities also accumulate a significant amount of packaging and other waste that need to be treated appropriately. Although no production activities are carried out in the warehouse, activities related to fragmentation, cargo consolidation, repackaging, etc., generate waste that also has environmental and economic effects and the objective is to achieve positive environmental and economic benefits. Two important factors are, on the one hand, to reduce the amount of packaging and waste used so that they fulfill their protective function, but not to use unnecessary resources that burden transport and space and, on the other, to properly treat waste from packaging. This may include packaging reuse practices, recycling of packaging depending of their material, use of recyclable or recycled packaging materials, etc. Due to the wide variety of packaging and packaging waste, there are relevant regulations in the EU that are defined in Directive 2004/12/EU on packaging and packaging waste. This establishes an obligation for companies and in particular warehouses to treat their packaging waste.

In addition to packaging waste, other types of waste are generated in the warehouses, which must also be treated properly in order to determine the storage activity as sustainable. These can be municipal waste, toxic waste, rejects, waste water, etc. In order for a warehouse to be sustainable, waste management becomes an important issue because of the amount of waste generated due the large amount of goods that pass through it.

## **5. LEGISLATIVE MEASURES AND CERTIFICATION METHODS FOR THE DESIGN AND CONSTRUCTION OF SUSTAINABLE WAREHOUSES**

Legislative measures specifically targeting storage facilities are difficult to find in most countries in the world. Existing legislation focuses on the energy efficiency of buildings and therefore warehouses can be considered as buildings. The legislation in EU gives guidelines for most countries in Europe through many regulation, directive and strategies such as Circular Economy and Energy Efficiency of Buildings. In the other parts of the world the situation is similar and often the legislative measures concerning the warehouse can be searched in energy efficiency policies for buildings or industrial facilities.

With the advent of sustainable practices and energy efficiency in building construction, independent organizations are developing standards for the certification of green buildings, and so far, several widely used environmental assessment systems for buildings are known. These systems can be used to evaluate different types of buildings, including warehouses. Each of these systems has been developed in different countries and the use of one or the other certification system is prevalent in different parts of the world. There are already several certified warehouse facilities in Bulgaria, which will be specified when considering the standards.

One of the most widely used method for measuring the environmental impact of buildings and certifying building sustainability is BREEAM (Building Research Establishment Environmental Assessment Method) (BREEAM) developed by the British organization Building Research Establishment – BRE Group in 1990. BREEAM can apply for new buildings at the construction phase, but also there is a compulsory standard for in-use and refurbishment buildings which means that an old warehouse could be reconstructed and fulfill environmental criteria. Depending on the category in which each building falls, it is assessed according to different criteria and as a result of the overall assessment formed the building is certified for a certain level - from “Pass” to “Outstanding”. The first BREEAM certified warehouse in Bulgaria is the Zagorka warehouse in 2012.

The other most commonly used green building certification method is LEED (Leadership in Energy and Environment Design) (LEED green building certification | USGBC). This is the second internationally recognized certification system created by the US Green Building Council. Similar to the previous standard, this one includes a set of rating system for design, construction, operation and maintenance of green building, including warehouses with certification levels from “Certified” to “Platinum”. In Bulgaria, a gold certificate is awarded to the newly constructed warehouse of “JYSK” with one of the most impressive facilities on the Balkan Peninsula.

Other popular systems are the German DGNB (DGNB – German Sustainable Building Council) , the French HQE (High Quality Environmental standard), the Japanese CASEBEE (Comprehensive Assessment System for Built Environment Efficiency) and others.

The optional nature of these forms of certification for energy efficient buildings shows that their introduction is a voluntary act of increasing the energy efficiency of the warehouses, improving their processes and reducing the environmental impact in and around the facility in long term. The fulfillment of these standards and the investment made demonstrate increased awareness and commitment of management, which in addition to the economic benefits, also bring benefits to the environment, employees and society.

## **6. FUTURE RESEARCH DIRECTIONS**

This paper was developed as a part of university project named: Warehouse Systems and Technologies in Logistics. An empirical study will be conducted within this project and the degree of application of sustainable practices in the warehouses in Bulgaria will be researched. Other future research direction would be to make a research in different countries and compare the state of development of sustainable logistics practices. The harmful effects of warehouse activities compared to other logistics activities could be also another field for separate research, as well methodologies that could be applicable for further researches. Every of the three main questions in this paper could be researched in more detail in separate papers because of its importance and wider implementation in different countries.



## 7. CONCLUSION

This article presents an overview of some essential questions in sustainable warehousing. The two important phases of construction and exploitation of warehouse are considered because of their different impact on environment. This is made due to the increasing interest of sustainable buildings in particular for logistics purposes. There are several certification programs for buildings, which allows to assess the level of sustainability of a building, and the most common of them are presented. Last but not least a list of most common methods and technologies used in the warehouses to reduce the impact on the environment is made. The purpose of this list is to give a direction for assessment of level of sustainability in the warehouses and to be a ground for an empirical research. In conclusion, the sustainable development has a more and more significant impact to warehousing and storage activities in logistics and is to be considered in the construction of new warehouses as well as the renovation of existing ones.

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# MANAGEMENT OF PROJECT LEADERSHIP IN HIGHER EDUCATION

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**Abstract:** *The latest Support to Participation in EU Programs project sparkles growing interest in investigating management mechanism of creating efficient project leadership in higher education. The Project reveals significantly different variables in hard core sciences research topics prevailing over the social sciences topics encompassing all priorities, e.g. in HORIZON 2020 funded by €77, 03 billion: 1. Industry driven: Strategic investments in key technologies, Support to innovative companies, 2. Researchers driven: Excellent science as the foundation of modern technologies, 3. Society driven: Concerns of citizens and society/EU policy objectives, Multidisciplinary collaborations. Being exposed to hands-on experience of multiple successful project applicants and project reviewers one could observe the significance of creating skilful project leadership to cover relevant project life phases: 1. Project proposal, 2. Project team comprising, 3. Project management, 4. Project results dissemination and 5. Visibility. Project management in Serbian higher education is prime skill also helping the internalization of the universities.*

**Keywords:** *Project Leadership Skills, Educational Setting, Hardcore Sciences, Social Sciences, Project Life Cycle.*

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## 1. INTRODUCTION

Since we belong to the academic community of the University of Niš we will describe its educational, research and internationalization settings. The University of Niš was founded in 1965 as a state HE institution. It is a medium-sized, mature and well developed academic community, comprising 14 faculties: Faculty of Civil Engineering and Architecture, Faculty of Economics, Faculty of Electronic Engineering, Faculty of Arts, Faculty of Law, Faculty of Mechanical Engineering, Faculty of Medicine, Faculty of Occupational Safety, Faculty of Philosophy, Faculty of Physical Culture, Faculty of Science and Mathematics, Faculty of Technology and Faculty of Education. The fourteenth - Faculty of Agriculture has recently been founded and it enrolled the first generation of students in the academic year 2018/2019. Most of those faculties have composite structure, i.e. various departments, divisions or majors, offering wide and diversified study and research opportunities at both undergraduate and graduate levels, including opportunities to obtain a PhD degree.

The University of Niš (UNI) presently has 24669 students at all levels of studies, 1723 teaching staff and 686 administrative and support staff.

UNI has significant experience in international programs such as Tempus, Erasmus, FP6 and FP7. Within the EM ECW program, the University of Niš entered the exchange of students and teaching staff in 2008 as a partner in the Project BASILEUS. In 2011, UNI became a consortium member of the Project EM2STEM. The University of Niš also became partner of other Erasmus Mundus programmes, such as SIGMA, ERAWEB, EUROWEB, GREEN-TECH. Currently, the University is involved in the following programs: ERASMUS+, CEEPUS and HORIZON 2020.

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One of the leading principles of the University of Niš is to become part of the European higher education area and to adjust its plans and programs against this aim, in the context of the reform of higher education system within the EU academic programs and other programs.

Uniform question in all project applications forms posed is if the partner organization has participated in a European Union granted project in the 3 years preceding any given application. This is a vital part meant to enhance the prospects of successful project application and therefore all granted projects of the higher institution are listed. It is relevant of course, whether you acted as a partner or as a coordinator of the project in previous projects. In our example one can see that the University of Nis is a respectful partner having experience in project granting and implementation both as a coordinator and a partner:

1. **Development of mechatronics skills and innovative learning methods for Industry 4.0** – Technical University of Cluj Napoca, **2019-1-RO01-KA203-063153** (strategic partnerships);
2. **DEEP: Development of the educational platform to facilitate adaptation to the new academic context of student migration** - Ivan Franko National University of Lviv, Ukraine;
3. **FINLEAD: Leadership in Public Finance: Building Capacity for Reforms through Education** - Wroclaw Univ. of Science and Technology, Poland;
4. **Improving the employability prospects to the students of economy by introducing more practical work to their study program** - Univerzitet Goce Delčev-Ekonomski fakultet, Štip, Severna Makedonija;
5. **ISOLINE: Information System of Quality Assurance Support for Ukrainian Higher Education Institution** - Ivan Franko National University of Lviv, Ukraine;
6. **EBETCMW: Entrepreneurship and Business Education and Training Center for Migrant Women** - Western Caspian University, WCU, Baku, Azerbaijan;
7. **VICORE: Cross-disciplinary Virtual Collaborative Research Environment to enhance research skills of Master Students and Young Researchers** - Hamburg University of Technology, Germany;
8. **SUSDev: Support to University Staff Development** - University of Sarajevo, BiH;
9. **INCEDU: Adopting European experience in electronic inclusive education for persons with disabilities in Ukrainian universities** - Ivan Franko National University of Lviv, Ukraine;
10. **AISEE: Academic Internationalization for Strengthening Economic Extroversion** - Aristotle University of Thessaloniki, Greece;
11. **HE REALITY: Higher Education Resources and Environment for Active Learning with Innovative TechnologY** – SALSIT State University of Library Studies and Information Technologies, Sofia, Bulgaria;
12. **emPOWER: EMPOWERING PHYSICAL EDUCATION AND SPORT MANAGEMENT IN MOLDOVA** - State University of Physical Education and Sport, Chisinau, Moldova;

**Source:** <https://www.ni.ac.rs/>

These are just first stepping stones and if you apply for a specific project program there are numerous sets of parameters and facts that are divided into roughly several categories covering relevant project life phases: 1. Project proposal, 2. Project team comprising, 3. Project management, 4. Project results dissemination and 5. Visibility.

## 2. PROJECT LIFE PHASES

For every \$1 billion invested in projects by companies in the United States, \$122 million was wasted due to lacking project performance, further on 57% of unsuccessful projects fail due to communication breakdown, according to Project Management Institute Research.<sup>3</sup> These data perfectly corroborate our idea that being a teaching staff at the university does not imply your expertise in the project management. Therefore, having centers for international relations at each faculty is felt nowadays a must. The University center prepares the necessary decisions and the accompanying documentation needed for the University participation in international projects and other forms of international collaboration. It also establishes contacts with universities and other institutions on the international level. With the increasing internationalization of universities each and every faculty comprising it is expected to search for, identify, devise, prepare and implement as many projects as possible since this is one of the crucial criteria of a starting or a reaccreditation process. To make it more feasible teaching staff, among other educational duties, is usually encouraged to participate in various forms of educational workshops, seminars, webinars and upgrade their project handling skills. Needless to say, that the difference between the STEM sciences-based projects and those related to humanities is huge. Sometimes the teaching staff from humanities lacks the firm foundation of hard-core sciences and is therefore advised to cooperate tightly on project designs. The latest Support to Participation in EU Programs project sparkles growing interest in investigating management mechanism of creating efficient project leadership in higher education emphasising following trainings: Training on horizontal aspects, Training for MEI and NCPs, Training on New programs and Training for Applicants.

Since faculty teaching staff creates applications for projects trainers usually follow this agenda: 1. Project idea development, EC project life cycle, identification of call for proposals and application guide, 2. Project documents preparation and submission of proposals, 3. Planning the implementation phase of the proposal (work plan preparation, management structure, consortium, 4. Budget preparation, 5. Evaluation of proposal & contracting, 6. Developing effective partnership, Lobbying, EU structure, EU budget for 2020 and beyond.

However, we need to be foremost prepared to understand the whole process of project life cycle and particularly of each segment of each phase. A 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. Every project starts with an idea which is provoked by a need or a problem that has been insufficiently solved or not solved at all. From idea to application is a long way to go. We must be familiar with already developed project ideas /concepts, we must find the suitable call that is within the area of our project idea, we must attend to the consortium building (assign different roles: Coordinator or Project partner), be wise about resource planning, organize project preparatory meeting “Brain-storming” with all partners, prepare the detailed project outline including draft budget calculation, read the latest EU documents related to our topic, and finally thoroughly read the latest scientific papers if we want to corroborate the need to further explore our project topic. For example, the trainers usually advise us to start with a catching idea and to further delve into it so that the evaluators will consider project idea worthy of evaluating at all, since 50% of all applications fail to reach the attention of the evaluators.

<sup>3</sup> <https://www.lucidchart.com/blog/the-4-phases-of-the-project-management-life-cycle>

Steps for the project initiation phase may include the following:

- Creating a feasibility study to estimate if the project can offer a solution to the set problem,
- Being aware of the scope and volume of the project: How far the project will delve,
- What will the project deliver as the outcomes: Define the product or service to provide,
- Identifying project stakeholders: Make and define targets or target groups and determine their needs,
- Developing a business case: Compare the potential costs and benefits for the project,
- Project objectives (one general and 3-5 specific) should be clear, realistic, measurable and achievable,
- Activities should be credible,
- Institutions should have sufficient capacity (human resources, financial resources, infrastructure, etc.),
- Activity and budget alignment are necessary.

During project development phase partners consolidate the idea into a concrete Project proposal, by defining the strategic and operational details as well as the responsibilities among partners. At the end of this stage the application form is submitted to the programme. This phase implies (Hartman, 2008):

- Organizing the responsibilities and accountabilities in the partnership and agreeing on the role of lead partner,
- Developing the project intervention logic; i.e., Project objectives, results and outputs,
- Working in detail on the project proposal, its justification and expected contribution to the programme strategy,
- Preparing the project budget,
- Keeping regular contact with the programme to get support for the development of the project and the application,
- Submitting the application form to the programme.

Contracting and start of the project implementation implies that at this stage the programme has taken a decision on the funding of the project, thus the contractual agreements are signed and the project can officially start off and what follows is:

- Signing subsidy contract with programme authorities,
- Finalizing the project partnership agreement and having it signed by all partners,
- Setting up the project coordination and decision-making structures, milestones and project meetings,
- Planning tasks and partner responsibilities in detail for the first part of the implementation period.

During Project implementation phase the project partners carry out the work planned to produce the desired outputs. Regular administration, management, monitoring and reporting activities take place, along with communication and promotion tasks. Changes to the plan are managed by exception in agreement with the partners and the programme. This phase implies following activities (Mengel, 2008):

- Carrying out project activities and achieving objectives,
- Carrying out quality control to produce the best possible outputs,
- Setting up smooth monitoring and reporting procedures and reporting to the programme as required,

- Managing risks and project modifications in agreement with the partners and the programme,
- Managing the partnership,
- Communicating and promoting project work and achievements,
- Building up a network of relevant contacts and initiating the uptake and using of project knowledge and outputs after closure.

At Project closure stage the project content activities should be completed and all outputs delivered. The partnership takes care of the final administrative provisions before the funding is over. The project and the programme reflect together on the results and lessons learned. At this phase following is implied:

- Finalizing the rules for the use of results after the end of the project with all involved parties,
- Ensuring all partners are aware of what is expected by the end date of the project, also in terms of audit and responsibilities after the end of the project,
- Drafting the final report and submitting it to the programme,
- Developing follow-up activities, if relevant.<sup>4</sup>

### 3. CONCLUSION

As companies (higher education institutions are increasingly been considered as companies) strive to deliver complex projects in hyper-competitive environments, the demand for skilled project managers is higher than ever before. Our management bodies at universities prove out the Project Management Institute estimates that by 2027, the number of project management roles will increase by 33 percent. We as teaching staff at universities face this challenge of accepting the role of project creators nowadays. Research also shows that demand is highest for practitioners with the necessary mix of competencies—a combination of technical and leadership skills plus business acumen. Thus, it seems that we have to perfect not only our expertise knowledge but also project life cycle knowledge in order to survive in the arena of highly competent project writers. From the perspective of the IPA CBC Bulgaria - Serbia program and Erasmus+ program researchers we could state that universities demands are huge, but our knowledge must accommodate different project lines and programs requiring constant upgrading and brushing up of our project management skills such as effective communication, negotiations, scheduling and time management, leadership, technical expertise, risk management, and last but not the least in importance, critical thinking and problem solving.

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[https://ec.europa.eu/research/participants/data/ref/other\\_eu\\_prog/cosme/guide/call/cosme-call-proposal-tour-15\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/other_eu_prog/cosme/guide/call/cosme-call-proposal-tour-15_en.pdf) COSME Programme

[https://eacea.ec.europa.eu/sites/eacea-site/files/userguides/eform\\_user\\_guide\\_version\\_media\\_ag\\_2018.pdf](https://eacea.ec.europa.eu/sites/eacea-site/files/userguides/eform_user_guide_version_media_ag_2018.pdf) CREATIVE EUROPE Programme

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# THE EFFECT OF FRAUD TRIANGLE ON UNETHICAL BEHAVIOUR OF STUDENTS IN ACCOUNTING COURSES

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**Abstract:** *Cheating behaviour on exams has generally become deep-rooted social problem. Current political and social examples in Croatia where corruption, criminal acts and nepotism are not punished adequately are just a quite good base for dishonest behaviour to become acceptable. The development of Internet and new technologies certainly open a door to a new dimension of unethical behaviour, and therefore represent a challenge in the fraud prevention. At the same time, teachers have to be one step ahead of students to minimize non-acceptable behaviour.*

*This paper seeks to link the Fraud Triangle concept to cheating habits in accounting courses. The survey was conducted among 104 students at Zagreb School of Economics and Management. Eventually, the results give an insight into reasons and circumstances that allow unethical behaviour, and into the ways students justify it. This research contributes accounting lecturers in fraud detection and prevention and preserving academic integrity as well.*

**Keywords:** *Classroom Cheating, Ethics, Opportunity, Pressure, Rationalization.*

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## 1. INTRODUCTION

In literature, many different definitions of fraud could be found. In a broad sense, fraud is intentional deception. According to International Auditing Standards (IAS) fraud is an intentional act of gaining unfair or illegal benefits, carried out by one or more person in management, Supervisory Board, by an employee or some third party (Dervišević and Vuković, 2015). Fraud also represent a false presentation of the facts that would make a person misled. Regardless of how it was defined, there are three key elements that explain reasoning behind the person to commit the fraud are pressure, opportunity and rationalization.

From academic perspective, fraud elements could easily be related to cheating behaviour of students at exams. Moreover, it's not excluded that cheating habits during the study could affect the fraud commitment later in career. Academic disrespect related to examination becomes a deeply rooted social problem. Usually it arises from a wider social and political context. Thus, a various example of nepotism, corruption and criminality that are not punished adequately contribute to unethical behaviour at college. To confirm that fact, a number of high-ranking people in Croatia were charged with plagiarism and falsifying diplomas, for which there was no public condemnation or sanction (Zmijarević, Doolan and Marčelić, 2017). So, which message does this send to students?

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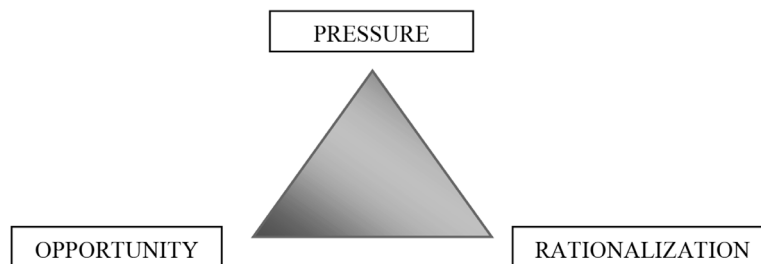
The development of the Internet and new technologies also represent an increasing challenge to lecturers in combating unethical actions. The question is what exactly motivates students to make unethical choices and how to communicate the importance and applicability of knowledge provided during the study.

This paper seeks to explore the relation between the fraud triangle concept and classroom cheating in accounting courses among students at Zagreb School of Economics and Management (ZSEM). The aim of the research is to provide reasons and motives of unethical actions, to find out what they consider as an opportunity, and how do they rationalize such actions.

## 2. FRAUD TRIANGLE

Fraud represents the strategy of achieving personal or organizational goals or satisfying human needs. In order to achieve such goals, both, moral and immoral actions could be taken. So, the question is what encourage and inspire individuals to use unethical methods rather than ethical.

In 1950s, Donald Cressey, American sociologist, criminologist and author made a significant contribution to the study of criminology. He was studying the people who commit fraud, conducting a research on why fraud is being done. Based on the research, he developed a theory that explains why people act in unethical way, and today it is well-known as Fraud Triangle theory. According to that, the three factors that make up a fraud triangle are pressure, opportunity and rationalization (Figure 1). (Singleton T.W, Singleton A.J., Bologna and Lindquist, 2006)



**Figure 1.** Fraud Triangle (Authors, 2019)

**Source:** authors

Pressure (or motivation) occurs as a result of personal, social, corporate and other factors. A person develops specific need which force it to find illegal ways to solve their own problems. The pressure could, for example come as a result of financial issues of an individual, tendency to achieve some personal goals, the desire to get a certain job and so on. Although people are often faced with a certain kind of pressure, it doesn't mean everyone will commit fraud. There are two additional factors that lead to fraud, and those are opportunity and rationalization.

Opportunity usually arise from weak and insufficient internal control. In other words, it represents the method by which fraud is committed. Rationalization is the third point of the fraud triangle, and it exist so that individual can justify unethical acts, most often because it doesn't consider itself a criminal or bad person. (Dervišević and Vuković, 2015)

Although the Fraud Triangle theory is usually related to corporate accounting scandals (for example, Enron, WorldCom...) which increased awareness of fraud existence, it is also very applicable to students and unethical behaviour at college.

### 3. RESEARCH METHOD AND RESULTS

The quantitative research was performed among 104 students at ZSEM, who were taking accounting courses in 2018 at both undergraduate and graduate level. For the research purposes, a survey questionnaire was created, containing a total of 12 questions. The aim was to get the information about frequency of cheating on accounting exams, motivation, opportunity and rationalization so that it could be shown through Fraud Triangle concept.

Table 1 shows the student demographics. An interesting fact is that classroom cheating is mostly spread among unemployed students. Is accounting too abstract for them? Can they recognize the benefits of knowledge provided and the way they can use it in their careers? Are they motivated to study at all, or they are under the pressure? Some of the answers will be found further in text, while a detail analysis on motivation of particularly unemployed students could be considered as a subject of upcoming researches.

**Table 1.** Student Demographics

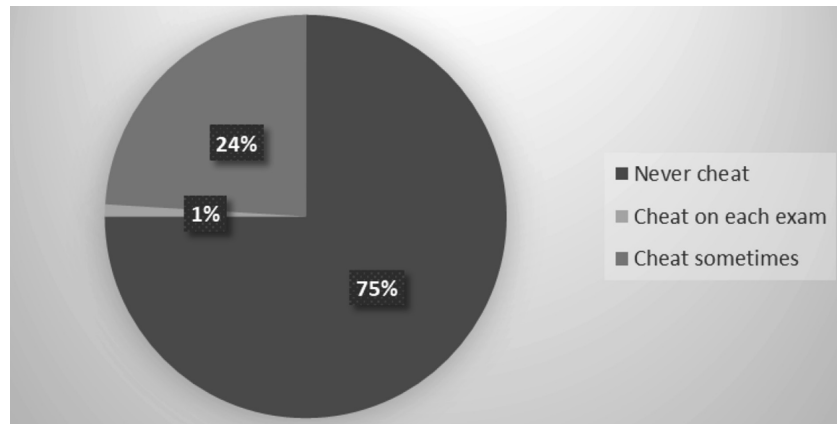
Variables	Frequency (%)
<b>Gender</b> (N=104)	
Male	41
Female	59
<b>Level</b> (N=104; average = 2,4; standard deviation = 0,9)	
1 <sup>st</sup> year (undergraduate)	12,5
2 <sup>nd</sup> year (undergraduate)	41,3
3 <sup>rd</sup> year (undergraduate)	40,4
4 <sup>th</sup> year (undergraduate)	1,0
5 <sup>th</sup> year (graduate)	4,8
<b>Study program</b> (N=104)	
Economics and Management – undergraduate	80,8
Business Law and Economics – undergraduate	12,5
Business Mathematics and Economics – undergraduate	1,9
Graduate MBA program	4,8
<b>Employment status</b> (N=104)	
Employed	12,5
Employed – student contract	21,2
Unemployed	66,3

**Source:** authors

Figure 2 illustrates that every fourth student cheat on accounting exams (25 per cent). Although it is expected that accounting courses are not familiar and interesting to all students, and regardless the fact that not everyone is good with numbers, this is still a significant percentage of classroom cheating so additional prevention measures have to be introduced in order to stop such behaviour.

The most common reason for classroom cheating could be found in the following statements:

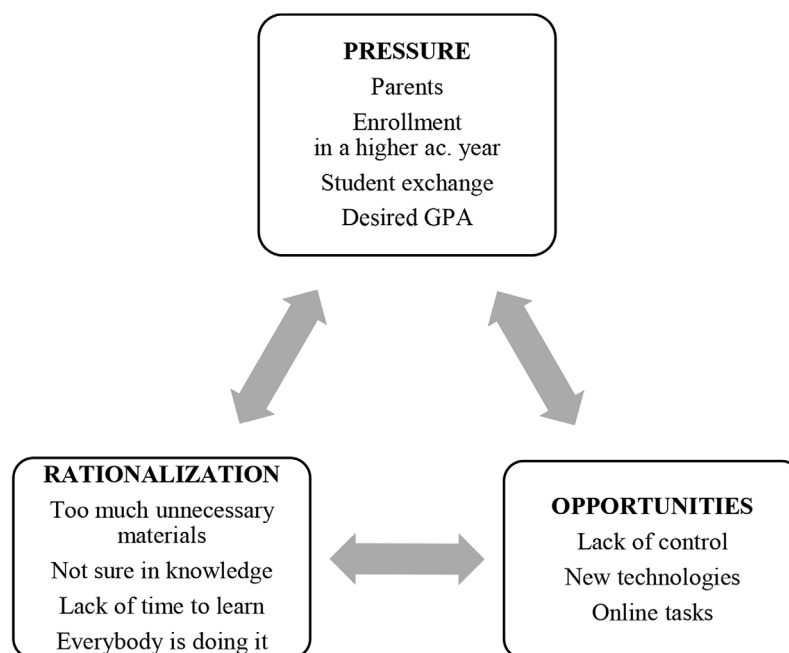
1. Course is too hard to understand (35 per cent),
2. Cheat on each exam, whenever possible, no matter which course (19 per cent),
3. Lack of time to learn (19 per cent),
4. Accounting course is unnecessary for my future career (8 per cent),
5. I did not get the point of accounting course (8 per cent),
6. Other (12 per cent).



**Figure 2.** Frequency of Cheating on Accounting Exams

**Source:** authors

Students do classroom cheating since they are under the pressure, which is mostly directed to completion of study and getting diploma. Pressure usually comes from parents, so students have to pass courses in order to gather enough ECTS credits to enrol in a higher academic year and eventually complete the study (49 per cent). There is also a pressure to get good grades in order to meet the criteria for student exchange application. Student exchange is one of the best ways to work in international environment and to prepare for business world. According to that students are motivated to get it, so they tend to cheat (35 per cent). Some students simply want to have excellent grades for various reasons. Since they are aware that they are not good in accounting, they do classroom cheating (12 per cent).



**Figure 3.** Fraud Triangle and Classroom Cheating

**Source:** authors

Opportunities for unethical behaviour are greatest in online assignments because of lack of physical control by lecturers. Therefore, students feel free to use teaching materials and other tools in order to do the exercise better (46 per cent). A great number of students (69 per cent) cheated at least once in online tasks using teaching materials, and 77 per cent did exercises with a help

of other colleagues. 23 per cent of them state that there is inadequate control by some lecturers on exams, while 16 per cent consider new technologies as a good way to do classroom cheating.

After doing classroom cheating, students rationalize unethical behaviour in different ways. Usually they state that there is too much unnecessary material that is hard to learn and understand (35 per cent), or they are not sure in what they know so they use unallowed materials for “just in case” (31 per cent). Students also rationalize classroom cheating through lack of time to learn for exams (25 per cent). Insignificant number of students have various ways to protect themselves considering there is not enough learning materials provided, they cheat because everybody is doing it, or they simply want to complete the study (3 per cent).

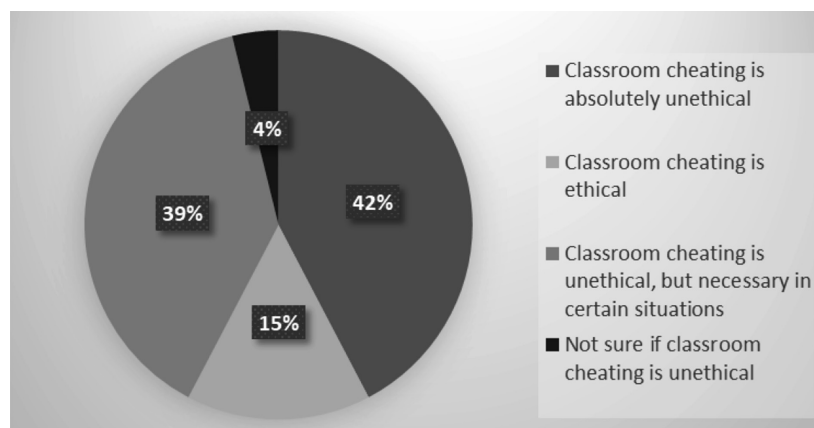
Despite the development of the Internet and new technologies, 80 per cent of students still use traditional cheating methods rather than “modern”, and those include cheat sheets, learning materials, quite talk, pantomime and replacement of exams. Another 20 per cent of students say they are using the advantages which new technologies offer, like smartphones, smart watches and hidden camera pen (Table 2).

**Table 2.** The Most Common Ways of Cheating on Accounting Exams

Cheating Method	Percentage of participants using particular cheating method
Cheat sheets (printed, hand-written)	43%
Quite talk to other participants	20%
Cell phone usage	14%
Usage of teaching materials	6%
Pantomime	9%
Smart watch	3%
Hidden camera pen	3%
Replacement of the exam with another participant	3%

Source: authors

Finally, the question is whether the students are aware of unethical behaviour or not. The research shows that 42 per cent of students understand that classroom cheating is not ethical at all. Some of them consider it is not ethical, but necessary in certain situations (39 per cent). A part of students does not understand the unethical aspect of cheating (15 per cent), while 4 per cent of them is not sure if cheating could be characterized as unethical (Figure 4).



**Figure 4.** Classroom Cheating and Ethics - from Student Perspective

Source: authors

#### **4. UNETHICAL BEHAVIOUR AND PREVENTION MEASURES**

Considering the results of the research and significant number of students who make classroom cheating, lecturers must think about implementing more effective prevention and detection measures. Prevention actions are for sure more effective because it's easier to stop unethical actions in advance than detect penalize it later. This research provides the valuable insight in opportunities and ways students cheat, and which will help lecturers to minimize or even stop classroom cheating in the future.

Students take accounting courses mostly on second and third year of the undergraduate study, when they are already well introduced to academic world, and it's expected from them to be grown up enough to understand the importance of knowledge that is offered to them at college. However, it seems like they often do not take it seriously, and measures that lecturers conduct are not good enough to stop classroom cheating. Based on that, lecturers must consider extra measures to prevent unethical actions, as well as detection measures and rigorous penalization for students who attempt to cheat.

#### **5. CONCLUSION**

Cheating habits, as well as other types of dishonourable behaviour have become a significant social issue. In academic world, unethical behaviour at exams can be observed through the concept of Fraud Triangle, which implies the presence of three basic elements needed to commit the fraud and that are common to all fraud perpetrators: pressure, opportunity and rationalization.

The research of the presence of cheating habits at accounting exams, which was conducted among students at ZSEM has shown that every fourth student make unethical choices in accounting class. The pressure for such behaviour could be find in meeting criteria to be eligible for enrolment for a higher year, satisfying grade average in order to apply for student exchange, and parental pressure to attain higher grades or to finish college. In order to cope with such pressure, students find opportunities in lack of control in online tasks, inadequate control during examination and opportunities arising from use of new technologies. Students most often rationalize their unethical actions blaming educational system or/and professors for having too much learning materials whose great part is needlessly; they are not confident in their knowledge, or they can't prepare due to lack of time. Although students have free access to library and online access to all learning materials, a part of them believe that there is not enough learning material to prepare adequate for exams. Some of them don't have a motivation to study, but just to earn a diploma.

Based on results of the research, lecturers must think of the measures primarily to prevent unethical behaviour, because prevention actions are more effective than detection. It seems very important to constantly point out the Code of Ethics. Students also must be aware of importance of knowledge provided, and the purpose of it has to be emphasized regularly. Such actions will hopefully lead to decrease of unfair behaviour and increase students' motivation to get required knowledge.

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# LANDSCAPE DESIGN FOR SUSTAINABILITY AND ECOSYSTEM SERVICES IN AN URBAN ENVIRONMENT: CASE STUDY OF TEHRAN AND HIS KAN RIVER

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Gioia Maddalena Gibelli<sup>2</sup>  
Alessio Gosetti Poli<sup>3</sup>

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**Abstract:** *The authors, with the awareness that climate change affects and changes the landscape, wanted to investigate how these changes are occurring within the metropolitan area of Tehran. Trying to keep a holistic method that embraces different disciplines, reasoning from large scale to small scale, the authors tried to study the main problems related to water scarcity and loss of green spaces. Subsequently they dedicated themselves to the identification of the present and missing ecosystem services, so that they could be used in the best possible way as tools for subsequent design choices. From the analysis obtained, the authors have created a masterplan with the desire to ensure a specific natural capital, the welfare of ecosystem services, and at the same time suggest good water management practices. It becomes essential to add an ecological accounting to the economic accounting, giving dignity to the natural system and the ecosystem services that derive from it.*

**Keywords:** *green infrastructure, natural capital, ecological network, landscape ecology.*

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## 1. INTRODUCTION

Nowadays it is important to try to design new green spaces that are linked to the concept of sustainability and that try to solve efficiently problems that in certain areas of the world are new, but that in other places, such as Iran, are historical problems. One of the main problems that urgently needs to be addressed is water scarcity or drought (Nasrabadi & Abbasi Maedeh, 2014, Anker *et al.*, 2019), mainly due to climate change but also due to incorrect water management and practices that lead to the not valorization of water resources; but it is also due to the strong uncontrolled growth of the population that consequently leads to an increase in water demand and uncontrolled exploitation of water resources (Pari Var *et al.*, 2008; Faryad, & Taheri, 2009). Ensuring this natural capital, the wealth of ecosystem services and biodiversity, means providing greater community welfare and development opportunities, as well as reduced vulnerability. It becomes essential to begin to add to economic accounting also an ecological accounting, in which to assign a qualitative and quantitative value to resources, natural systems and their services (Smaniotto Costa *et al.*, 2008; Haq, 2011; Shahani, 2012; Dinavardi *et al.*, 2014; Green *et al.*, 2016; Pulighe *et al.*, 2016; Jennings *et al.*, 2019).

The purpose of the project was to visualize a green public system that could help to improve social-ecological aspects, life quality and rediscover the natural capital that is present in the West part of Tehran, passing through the basin of Kan river (Figure 1). The research tried also to

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understand the impact that urban greening can have on a city like Tehran, that in the last twenty years has experienced strong urbanization at the expense of the present green.

By analysing the current situation of Tehran, we have faced the lack of public green, poor pedestrian infrastructures, a discontinuity of the green due to the urbanisation the city is living. Moreover, Tehran is confronting the important problem of scarcity of water, which implies different and connected dynamics. Our vision to give a solution to these problems is to propose some guidelines that can be used to create a green network.

The strategies in the work was trying to keep social, ecological and economic levels united, taking into account the human and cultural heritage of the place (Masnavi *et al.*, 2016), including the natural ones. The ecological network become a green infrastructure connecting the different areas of the city, each one with similar aspects but also with its own uniqueness. That's why it became essential to give guidelines, tools that can be adapted to each situation and problem. The design was focused on supporting and preserving the cultural heritage, without altering the present situation, but rather trying to value what we have recognized as potential.

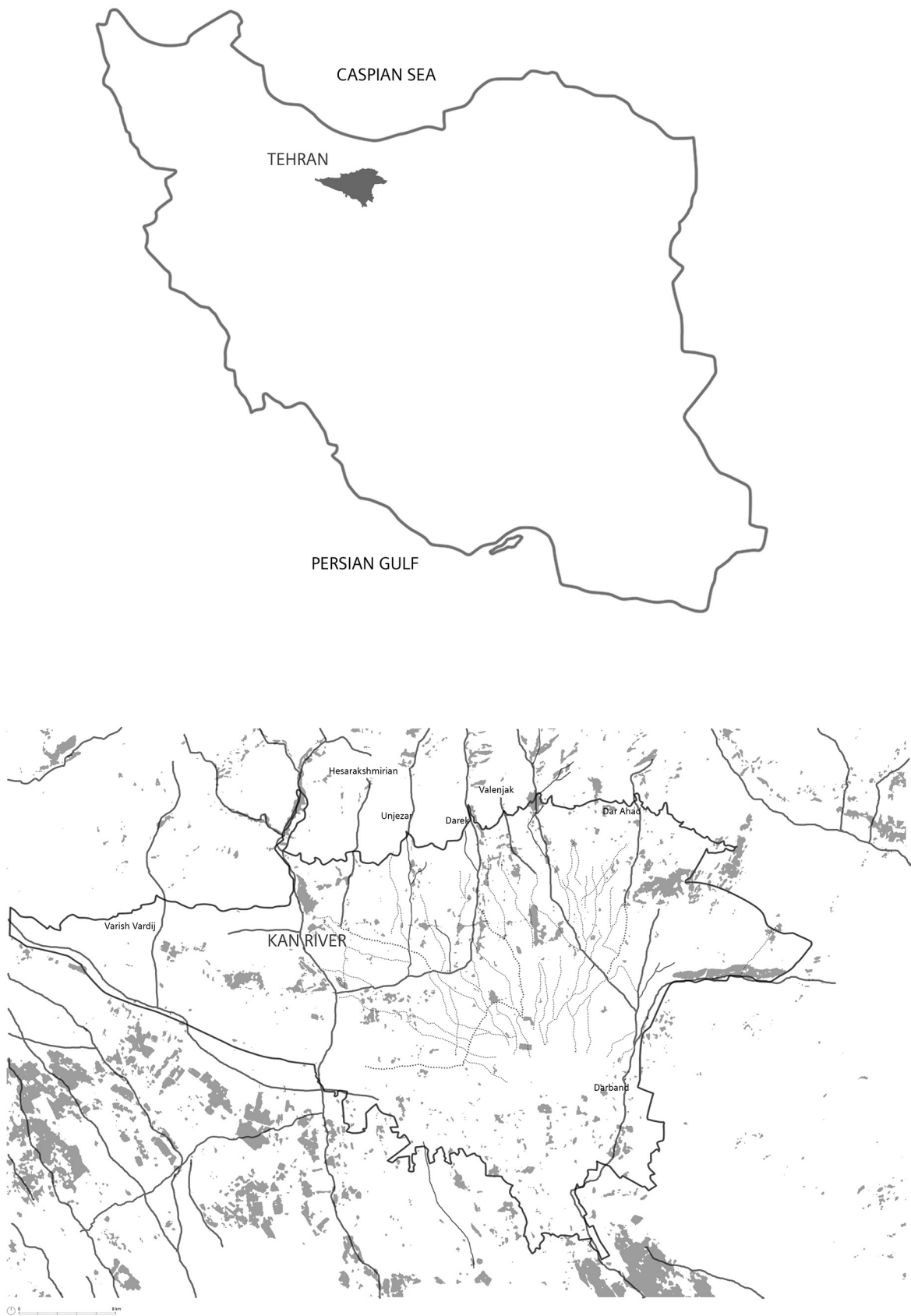
## **2. TWO IMPORTANT PROBLEMS**

### **2.1. Water scarcity**

More than 50% of population lives in the west and north, while about 70% of water resources is located in these areas (Bitaraf, 2000). Construction and performance of hydraulic structures such as dams, Qanats, and conveyance channels for reservoirs, transmission and distribution systems have been experience by Iranian people for 3000 years ago. Three decades ago, before 1970, because of low population, agricultural nature and low rate of urban population, water supply was not considered as a critical problem of the country. During the last three decades, large dams have been built around the big cities such as Tehran, Isfahan, Ahvaz, in order to supply water for urban, industrial and agricultural consumption. Where surface water has not been available, ground water has also been used as water resources for supply. Since 1980, a rapid population growth as well as rapid economic change has led to significant agricultural and industrial development and consequently increasing urban population (Manouchehri, 2000). Consequently, dramatic changes have been encountered in water demand. Since 1990 water supply has appeared as a critical national problem. There are mainly four reasons for which water crisis occurs (Manouchehri, 2000):

1. Rapid population growth which is disproportional to the environmental capacity,
2. Development of different parts of the agriculture, industry and urbanization,
3. A decrease in the number of appropriate structures to store, distribute and convey water; due to the lack of financial sources, which has led to the less investments,
4. Worldwide occurrence of drought.

Recent studies show that water demands have increased at a rate of about 5 to 6 percent annually. During recent years water consumption has risen above 350 liters/person/ day. If the population continues to rise at the same rate (about 2 percent annually) as it did from 1995 to 2000 the volume of water consumption in Tehran is projected to reach 1300 Mcm in 2030. Most of the water is expected to be supplied by groundwater pumping and the transmission of water from further reservoirs (National Research Council, 2005).



**Figure 1.** Study area: Kan basin and green areas  
**Source:** Elaboration made by authors

## 2.2. Loss of green

Today in many cities there is an evident imbalance between nature and city due to the lack of a coherent green network and to an unsustainable urban development that creates a fragmentation and a loss of the natural infrastructure. Therefore, the intent to realize ecological network nowadays is a big challenge, need and solution for other important problems. A green system, thanks to its intrinsic connectivity features, allows a sense of cohesion of the cities, creation and improvement of ecosystem in urban environments, improvement of bioclimatic conditions, and a general improvement of life quality (Saboonchi *et al.*, 2018).

In the metropolitan area of Tehran, it's easy to notice how the natural ecological features and the built don't have a dialogue and a complementary interaction, due to the uncontrolled sprawl that the city is living. This continuous expansion of the city has changed a lot the ratio between impervious land, vegetation land and open land, leading at the phenomena of fragmentation (Figure 2). All the four periods show that the increase of impervious land is gradual and its percentage of increase is constant throughout the time. Meanwhile for the open land the main changes occurred during the first period (1988-1998) and the second one (1998-2008). The biggest loss of the vegetation was during the third period (2008-2018) when it was almost about the 50%. In 1988 the open land was the main subject of the city, more than twice than the impervious land, but during the years it left a big amount of its coverage to the impervious land, with a decreasing around the 68% from 1998 to 2018. More or less the same thing happened to the vegetation land that lost his 69% of coverage (Rousta *et al.*, 2018).



**Figure 2.** Fragmentation of green

**Source:** Landsat Image Gallery – Elaboration made by authors

Preservation, restoration of the remnant natural patches and corridors became a good way to continue the natural flows, offer the possibilities to have benefits in several respect, and solve other problems that afflict the city, with the opportunity to create a sustainable and resilient city. The possibility of preserving all this means being able to maintain the ecosystem services that

are offered to us by nature, and therefore to reconsider the importance of the value of natural capital. Starting to give value to nature means realizing that many resources on earth cannot be replaced and therefore we must begin to review our way of living, of consuming and heading towards new economies, capable of indicating its sustainability performance or the different environmental impact of certain choices, actions, products.

### 3. MATERIALS AND METHODS

For the collection of materials, we made use of the bibliography available from the Tehran University database, while for the various maps, we used specific sites such as Landsat Science and Google Earth. Instead, for the processing of the collected data, we used programs such as *Gis* (Geographic information system, QGIS software) and *Cad* (Computer-Aided Drafting). For the calculation and evaluation of ecosystem services, we instead referred to Burkhard & Maes (2017).

We used a holistic method, trying to reach the general aim from different parallel layers. Even if the projects are restricted to specific areas, they try to deal with all the problems that have been analysed and addressed. Our purpose was to give a contribution for a different vision of the areas taken into consideration, hypothesizing how the city changes in the moment in which the revitalization of some areas is realized. We have tried to set ourselves neutral in front of all the issues that have emerged, so that we would reach more specifically the goal of inspiring in some way the citizens of Tehran. For our work we tried to follow a subdivision guided by the scale, starting from the largest XL to the little XS. In this way the reader could have an easy comprehension and control of every single aspect characterizing the site, and at the same time could approach gradually to the final proposal. The idea was to create a sort of journey, beginning with a general knowledge of the city of Tehran and its problems, then exploring the selected areas, and their issues on a large scale; and finally dealing with the site where the project has been developed.

### 4. ANALYSIS AND RESULTS

The starting point of the analyses, following the methodology reported in the previous paragraph, was the geolocation of the area of the Kan river, seeking from a wide territorial scale to fix it in space and to see at first map reading what its relationship was with the whole system, natural capital. Subsequently, our study concentrated on the Kan River basin scale analyzing the dynamics that interest it. We therefore started to analyze the Kan river as a focal element, as it influences all the other dynamics. We analyzed its relationship with the city, using typological sections as a tool to understand how it is seen and experienced by the inhabitants. Subsequently, we focused on understanding how over the years it has changed in its morphology and how these changes have influenced the surrounding vegetation, and the daily activities that depended on the river. Finally, we concentrated on understanding the risks of vulnerability that the Kan River causes in the section of city of Tehran that it passes through. The analyses then focused on ecosystem services, working both at the Kan basin scale level and at the neighborhood scale level. On both scales, therefore, we have identified the ecosystem services present at the moment, and then try to identify which ecosystem services were absent and which ones among those present to be improved (Figure 3). It was also fundamental to recognize each of them their importance, weight starting from the needs that had been stated by the inhabitants of the western part of Tehran.

The analyses we carried out allowed us first of all to understand what the dynamics involved in the study site were, then to understand the major problems that the site presented and then to

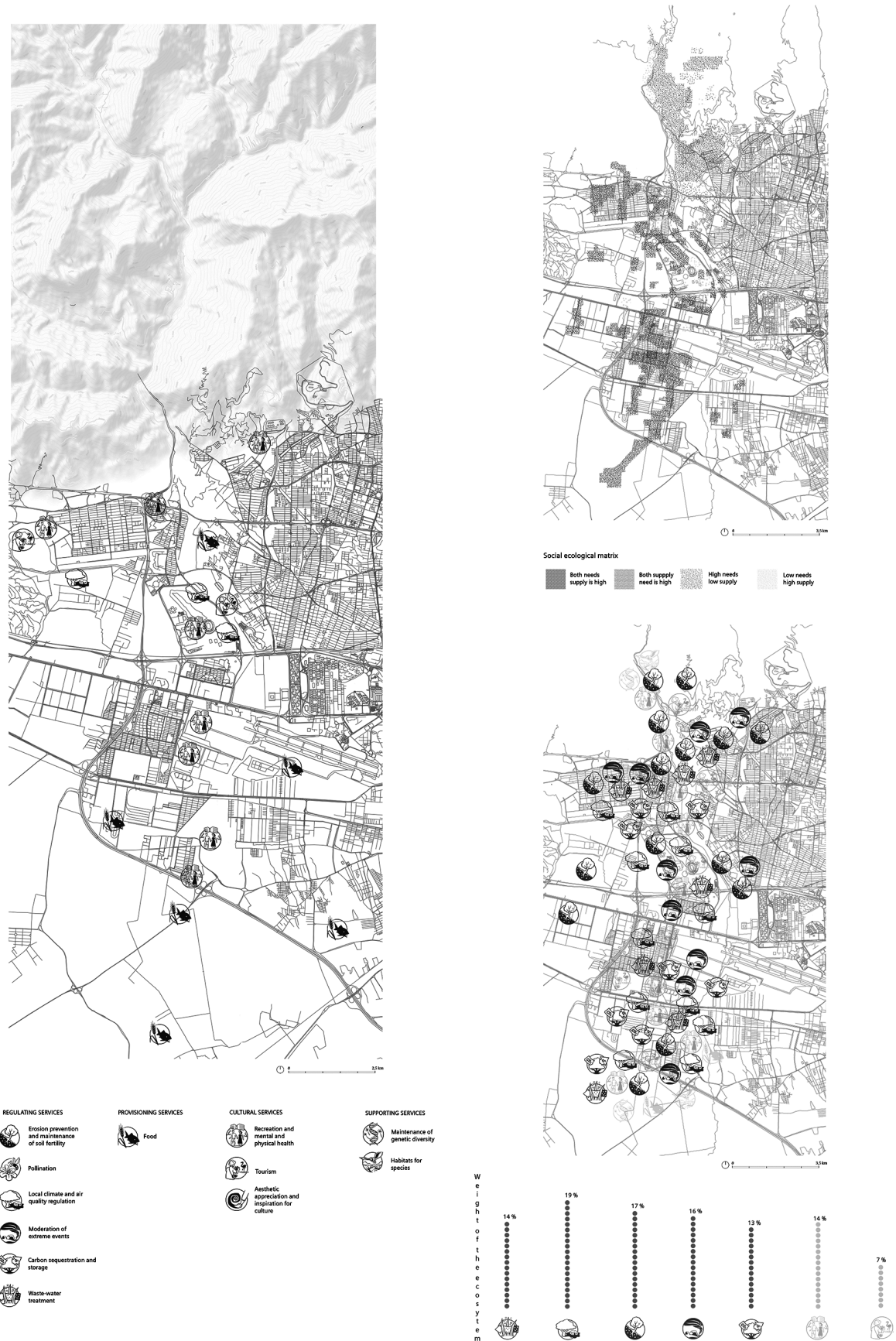
understand what was the value and potential of the natural capital present. From the analysis, in particular from the summary map that we have realized (Figure 4), we can see that the main problems of subsidence and flooding concern the whole basin, from north to upwards, hitting large areas of the city that presents different addresses: residential and north and south, sports and industrial in the central part. It is also noted that there has been a great loss of greenery over the last forty years, and this loss has encouraged certain problems, as can be seen in the northern part, where the greenery that once served as protection against flooding is now one of the most vulnerable. The map also shows how it is necessary to try to reinsert that lost green along the river along its entire stretch, trying to re-naturalize its margins, and go to build new green areas in the areas most prone to flooding, which can increase natural capital presents, which in recent years has been impoverished, leading to a decrease in the presence and efficiency of ecosystem services. This last consideration stems precisely from the analyses we have made regarding ecosystem services. By comparing those present and those necessary for an improvement in the quality of life, we have been able to give a qualitative and quantitative value to the landscape, both at present and in the concept state. The ecosystem services of the analyses have become project tools and founding elements of the following project guidelines. In fact, the subsequent design choices were all aimed at thinking about a green infrastructure that was able to emit the necessary ecosystems, and that every single part of it could eliminate in its entirety, or at least in large part, the problems that we had identified.

## **5. MASTERPLAN DESIGN**

The vision for Kan rivers was to make it an ecological corridor that can start from the foot of the mountain to the city limits, creating and restoring relations with the urban fabric it meets, and leading to a general improvement in the quality of life of this part of the city of Tehran, offering for those cities accessible, safe and sustainable green areas. The aim was reached thanks general strategies that foresee the protection the existing open space, the realization of new open space as green area or parks where to practice cultural and recreational activities; to involve the community in the organization of the activities that have to result integrated each other; to supply access to local biodiversity; to implement the sense of security, accessibility and attraction of the spaces; and to think new policies for a good practice related to the management and maintenance of this new area (Payami Azad & Laghai, 2013). For the Kan basin it was also important suggest different tools, measure that allows to reduce the hazard of flood. To achieve this result, become fundamental think of good watershed management practices in order to reduce the flood at upstream, use vegetation to obstacle entry of sediment and erosion, create along the river buffer zone. Also, the city can have an important role, by reducing the impervious surfaces, and becoming the area where to host detention ponds, bioretention ponds, swales, cisterns and so on (Andik & Sarang, 2017).

The project wants to be a model where it is possible to co-centre two essential strategies: the human connection and the connection of the green, where the river becomes the starting element and on which lay the main bases. The project master plan (Figure 5) was the result of the different considerations that have been made previously. Four fundamental principles can be recognized: the naturalisation of the river, the expansion of the corridor also in the directions transversal to the river, the reforestation of the area and the creation of phyto-purification systems. In addition to proposing a consistent realization of green areas, it was essential to identify equipped areas that can be used as a meeting place by the community: it was therefore tried to redevelop some previous buildings of the quarry, reassigning to them new functions such as

# LANDSCAPE DESIGN FOR SUSTAINABILITY AND ECOSYSTEM SERVICES IN AN URBAN ENVIRONMENT: CASE STUDY OF TEHRAN AND HIS KAN RIVER



**Figure 3.** The ecosystem services distribution  
Source: Base Open Street Map – Elaboration made by authors



**Figure 4. Risks within Kan basin**  
**Source:** Base Open Street Map – Elaboration made by authors

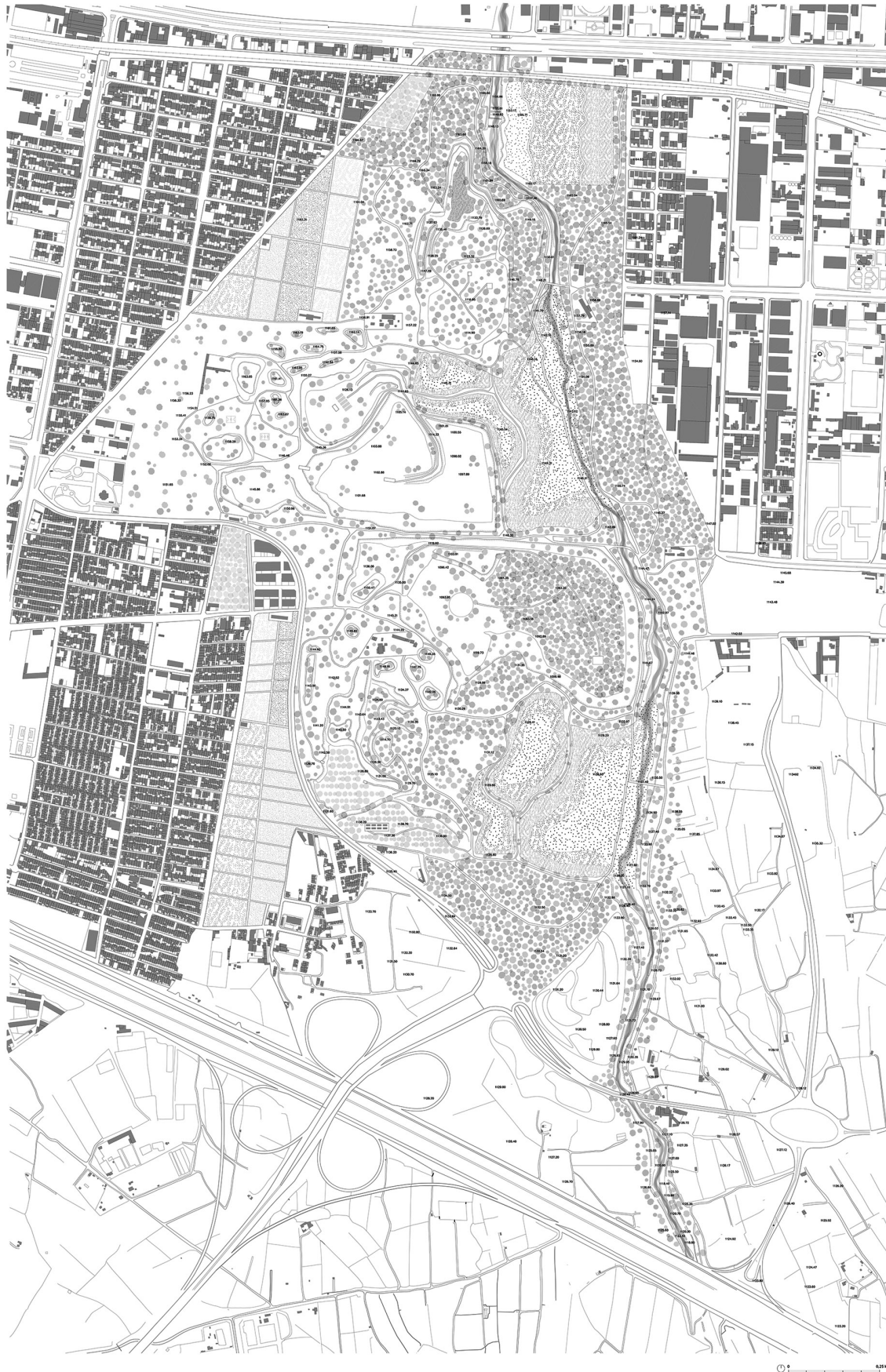


museums, art galleries and cultural centers. At the same time, equipped areas and squares have been created that can become a place for outdoor activities such as sports, concerts and cultural events organized by the community.

In order to address the problem of water scarcity, the project has decided to propose three natural purification areas that can clean the water coming from the sewage system and put it back into circulation, in particular pouring it into the river from which it can then draw as a resource to irrigate the fields. These waste water management systems also provide incentives to improve water quality. Water purification takes place in two different stages: the first stage is characterised by phytoremediation, one of the five phytoremediation techniques; the second stage is phytodepuration. The first step takes place in the areas where the new agricultural fields designed specifically to carry out this function have been created. In phytoremediation the roots of plants absorb those organic compounds present in the water, such as chromium, mercury and cadmium. Here we have chosen to use plants such as *Helianthus annuus* L., *Brassica juncea* (L.) Czern., *Zea mays* L. and *Medicago sativa* L.. The water that has undergone this first treatment is then channeled towards the two wetlands, which are composed of three different basins arranged in terraces. Here the water undergoes another purification treatment before being channeled directly into the river. The plants that have been identified are all hydrophytes such as: *Phragmites australis* (Cav.) Trin. ex Steud., *Iris pseudacorus* L. and *Typha latifolia* L.

## 6. FUTURE DEVELOPMENT

The main intent therefore was to provide guidelines, which can be used as tool to be repeated in the design of new green areas in order to create a sustainable city. We ourselves have tried to make a reflection on these guidelines that we have assumed in order to make a configuration of a green network to be implemented in Tehran. Our vision is to try to develop other continuous bands along the borders of the metropolis of Tehran, assuming the value of buffer zones and transit zones with the others reality outside the city; and at the same time play a leading role in controlling urbanization that is living, the other perspective is to see the rivers not only as a starting point for incentive a realization of a green corridors according to their vertical development, but also suggest green areas with horizontal development that can be interpreted or as important patches to be placed in urban voids or as corridors that connect to other vertical ones. All this vision that we have is part of a wider vision: the possibility of rebalancing the urban ecosystem. Rebalancing the urban ecosystem means trying to reduce the gap between the three components that make up the ecosystem: producer, consumer and decomposers. Internally, the urban ecosystem is made up of consumers represented by man and decomposers represented by purifiers; producers are not present, since most of the resources come from outside. If it is possible to increase the city's ability to produce the resources necessary for its operation; to reduce man's unscrupulous use of the resources present and to make the best use of decomposers, the ecosystem approaches a situation of entropy, general equilibrium. To achieve this goal for us the solution is to try to protect and rebuild the natural capital, and trying to develop new economic models that allow the enhancement and conservation of ecosystem services allowing them to guarantee the services they can offer us. This commitment therefore involves various actors in the territory, as well as national, regional and municipal institutions. The concept of „transdisciplinarity” becomes fundamental: to create working groups where figures from different sectors such as economics, environment, landscape, architecture, ecology, agronomy, etc. are present; and who make their knowledge available to the will to create landscapes, territories that are protected and more resilient than human stress, and at the same time start thinking about a market that looks more and more interested in sustainability.



**Figure 5.** The future vision

**Source:** Base from Cad materials – Elaboration made by authors

## 7. CONCLUSION

It was important for us to provide us with tools and multidisciplinary approaches so as to be able to better understand the dynamics that involve this fragile area. Our visions of greens have tried to understand what the problems were and what their potential, allowing us then to orient the city towards the direction that for us seemed more appropriate. The starting point of the project was to investigate the relationships between human dynamics and the emergence of the problem of drought. Our intent was to provide guidelines that could be a tool to be used in order to manage the problem of water in a new way and at the same time try to take the city to a city sustainable, thanks to the creation of green connections and patches. Working on different scales, and integrating the whole project as a journey, gave us the possibility of being able to be always aware of our choices and to remember ourselves as the project area, which belongs to the small scale, be it always influenced by the dynamics concerning the larger scales.

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# STUDY OF THE IMPACT OF RAISING THE RETIREMENT AGE ON ECONOMIC GROWTH IN THE DIGITAL ECONOMY IN RUSSIA AND EUROPE

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**Abstract:** *The article presents the results of a study of the impact of pension reform in Russia on economic growth and quality of life in a digital economy, taking into account the experience of raising the retirement age in Europe. The aim of the study was to identify and analyze the impact of raising the retirement age on economic growth in the context of the development of digitalization in Russia and a comparative analysis with European countries.*

*Results: the studies conducted allowed us to develop a system of indicators characterizing the impact of raising the retirement age on economic growth and the quality of life of the population in the context of digitalization.*

*The authors found that raising the retirement age leads to a change in labor relations in Russia and Europe. The application of the proposed indicators can be used in the formation of a balanced state socio-economic policy in the field of institutional changes in the field of labor relations and raising the retirement age. The study was carried out under a grant from the RFBR № 19-010-00362 A.*

**Keywords:** *Pension reform, Economic growth, Quality of life, Digital economy, Digitalization, Russia, Europe.*

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## 1. INTRODUCTION

One of the trends in the current socio-economic situation in many countries of the world is the aging of the population, respectively labor resources.

This trend is expressed in an increase in the share of elderly citizens in the age structure of almost all countries of the world. Thus, according to the United Nations and Russian researchers [1] over the past 65 years, the proportion of the older age group (from 65 years) has increased from 5% to 8% in total the world. According to UN forecasts [2], these trends will continue and intensify. So, in developed countries, the proportion of senior citizens increased from 8 to 17%, in Russia – from 5 to 13%. According to Russian experts, by 2050 it will reach 22%, in developed countries – 27%.

The noted demographic trends are expressed in an increase in the share of elderly citizens in the age structure of the population (aging of the population) [3]. These trends are objective in nature. Thus, a significant improvement in the quality of life, medical care, education, and an increase in income levels explain the phenomenon of increasing people's life expectancy, which is

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confirmed by statistical data. In Russia and in Europe, a steady growth trend in life expectancy is recorded. The noted facts lead to an increase in the load on the pension system of European countries and Russia. In addition, according to experts, an aging population will slow down the growth rate of GDP by 0.23 percentage points on average each year from 2019 to the 2025th [4].

It should be noted that in different countries there are specific problems inherent only in a particular country. For example, in Russia, general trends in population aging are aggravated by the presence of demographic waves dating back to the time of World War II. They increase the imbalance of the pension system. It faces either an “unexpected” surplus (this was the case in the early 2000s, when the small generation born in the 1940s retired, and the large generation born in the 1980s was part of the workforce), then unexpectedly quickly growing deficit. In addition, in Russia today more than 12 million people are employed in the informal economic sector who do not pay or pay contributions to the pension system only partially and thereby do not participate in the formation of a joint pension fund. However, pension legislation provides them with significant pension guarantees.

Another aspect of the problem is that there are fundamental differences in the structure of needs of pensioners of different ages. This, along with monetary, requires non-monetary forms of support during the retirement life. While relatively “young” pensioners are more in need of money, in older retirement ages the demand for institutional services of the social sector (health care, pharmaceuticals, care services), which cannot be satisfied on the basis of a moderate increase in pensions or their indexes, sharply increases.

The aging of the population coincided with an important global trend - global digitalization and informatization.

Two global trends - the growing share of older people and the automation of production and business processes form dangerous “scissors”. Thus, large-scale digitalization of socio-economic and labor processes, aimed at economic growth, requires new knowledge and competencies, transforming social and labor relations. The economy needs “flexible” young qualified personnel, ready to work in a highly dynamic digital environment, able to quickly learn new technologies. Is the older generation able to work actively and productively in a digital environment, providing the necessary economic growth?

Studies by a number of scientists have shown that today even a young specialist faces certain problems in working with digital data. Personnel over 50 experience even more difficulties. However, retraining an experienced employee older than 50 years costs exactly half the price than investing in a young specialist.

Highlighted trends determine the implementation of pension reforms in terms of extending the retirement age. The process of reforming the pension system, which is one of the most important components of the social policy of European countries and Russia, makes serious adjustments to the functioning of social and labor relations and leads to the retention of older workers in the labor market (at enterprises).

Accordingly, the purpose of this study was to identify and analyze the degree of influence of raising the retirement age on economic growth in the context of the development of digitalization in Russia and a comparative analysis with European countries.

**Materials (literature review).** It should be noted that a variety of scientific works in the field of studying the effect of population aging on economic growth (Iga Rudawska, 2010 [5]; Carolin Nerlich and Joachim Schroth, 2018 [6], Iparraguirre J.L., 2020 [7] and many others).

For example, the “overlapping generation” (OLG) model (Baksa and Munkacsi, 2016 [8]) shows the macroeconomic effects of population aging on European countries. The model takes into account changes in the structure of the population due to a decrease in the birth rate and an increase in life expectancy, which has important consequences for the supply of labor in the labor market. The advantage of this model is that it allows assessing the impact of an aging population on the basis of a specific set of macroeconomic indicators, as well as assessing the consequences of various types of pension reform in European countries. This model does not take into account the influence of axiological and many other aspects of pension reforms on economic growth, quality of life during the transformation of labor relations in the context of digitalization, etc.

## 2. METHODOLOGY AND RESEARCH METHODS

As part of the study, scientific publications of foreign and domestic authors were used. In the process of summarizing the results, a systemic axiological methodology, a dialectical approach, general scientific research methods such as induction and deduction, analysis and synthesis, and statistical methods of information processing were used.

To study the effect of raising the retirement age on economic growth and the quality of working life in Russia and in Europe, the annual research indicators of the Federal State Statistics Service of Russia ([www.gks.ru](http://www.gks.ru)) are taken.

The concept of „economic growth” is interpreted as a steady tendency to increase the volume of gross domestic product, which depends, inter alia, on the increase in the working age of people employed in the economy and the transformation of social and labor relations, which helps to improve the quality of life of the population.

The category of the quality of life of the population in the context of this study is considered by the authors as the degree of satisfaction of certain human needs, characterized by socio-economic indicators that determine the institutional and axiological perception of reality, both at the social and individual levels.

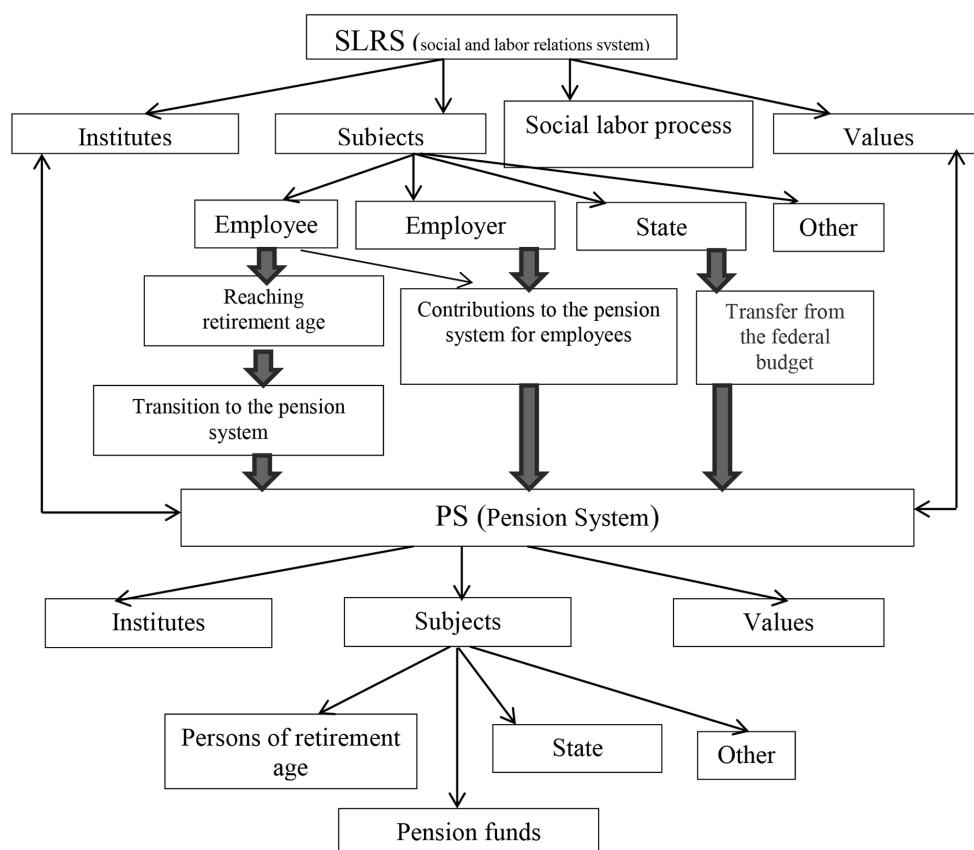
The authors proposed a hypothesis that raising the retirement age leads to the transformation of social and labor relations at enterprises, which affects economic growth and the quality of life of the population.

## 3. RESULTS

The analysis of statistical and analytical information revealed that the pension reform in Russia in terms of raising the retirement age has led to the transformation of the system of social and labor relations at enterprises. Thus, according to the survey (more than 1,700 respondents – persons of pre-retirement age and working pensioners) more than 22% of respondents changed working conditions and labor relations, in particular 5.5% were transferred to flexible forms of employment, 8.7% were transferred to fixed-term labor contract, 6.1% of respondents reduced wages without reducing the volume of official duties. Practically in all enterprises where the

survey was conducted, changes were made to collective labor contracts. In addition, studies have shown the emergence of new problems and contradictions in the system of social and labor relations in the framework of the implementation of pension reform. For example, in connection with the automation and digitalization of technological processes, the number of employees is reduced (this trend is noted in corporate social reports of most large companies); however, if it is necessary to preserve jobs for retirees, there is an imbalance in the age structure of workers towards aging, which contributes to growth opportunistic behavior, which ultimately leads to a decrease in the efficiency and quality of labor. An employer striving to increase labor productivity is switching to flexible forms of employment in relation to persons of pre-retirement age.

The studies revealed the relationship between the system of social and labor relations and the pension system, shown in Figure 1. Identifying the relationship between social and labor relations and pension, the logic of the authors' reasoning was formed as follows, for example, the subject is an element of the system of social and labor relations. Upon reaching his retirement age, he becomes an element of the pension system, and it should be noted that he can remain in the service station system for some time. This transition (from the service station system to the software system) is regulated by certain institutions of the social and labor relations system (SLRS) and the pension system (PS).



**Figure 1** – The relationship between the system of social and labor relations and the pension system

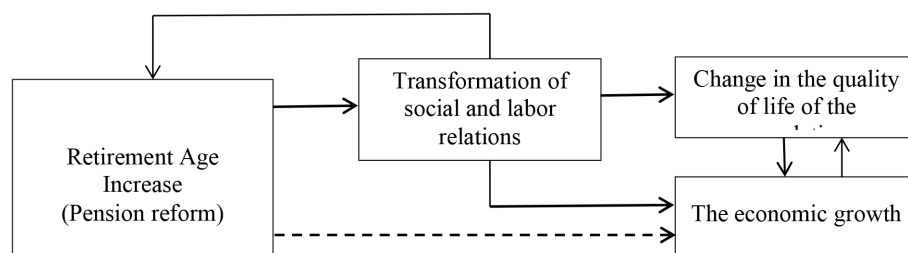
The SLRS subject “employer”, within the framework of certain SLRS and software institutes, is obligated to transfer certain contributions to the pension system for the “employee” (moreover, in the certain SLRS form, the employee must independently make these contributions to the pension system).



In addition, the theoretical and methodological analysis of these categories by the authors showed the same axiological orientation of the SLRS (social and labor relations system) and the PS (pension system) – to ensure the quality of life, manifested both on the public (in the form of macroeconomic indicators of economic growth and the level of social tension), and on the individual (in the form of meeting the needs and needs of man) levels. Accordingly, the relationship of the value-semantic perception of institutional changes in the system of pension provision by subjects of social and labor relations and pension provision is visualized. Then, the value-semantic structures obtained in the assessment by the subjects of service stations and software of the occurring institutional changes in pension provision leads to the transformation of values in the system of social and labor relations.

Consequently, the institutional reform in terms of extending the retirement age due to transformations in the institutional forms of the system of social and labor relations, on the one hand, determines the need to prevent crisis trends in the economy, ensuring economic growth, and on the other hand determines new changes in social and labor relations that affect the quality of life of the population.

Thus, there is a steady connection between the increase in the retirement age and socio-economic changes that affect economic growth and the quality of life of the population (Figure 2).



**Figure 2.** The effect of the transformation of social and labor relations on economic growth and the quality of life of the population in the context of pension reform

So, for example, employers (enterprises) are striving for production growth, which should be achieved by increasing labor productivity, which in turn is achieved through automation and digitalization, which leads to an increase in enterprise income, and, accordingly, at the macro level, to GDP growth. The growth of employer income leads to an increase in budget revenues (through tax revenues), respectively, the state can increase social spending (meeting public needs) and economic development. The growth of enterprise incomes leads to an increase in the income of workers who satisfy individual needs, which leads to an increase in the quality of life of the population.

The authors propose a system of indicators (Figure 3) that characterize the effect of raising the retirement age on economic growth and the quality of life of the population, based on the criteria for economic growth, which is due to the optimal ratio between production results, social and individual needs. In the context of this study, a criterion is a key feature defined by the measurement of a specific process, in particular economic growth and quality of life. Based on the classical interpretation of economic growth as an economic category, taking into account the factors that determine it, the authors determined the following criteria:

1. The level of institutional changes in the systems of social and labor relations and pension provision, which determines the ability of the state regulation mechanism to eliminate and prevent negative social consequences that can lead to a decrease in GDP.

2. The level of growth of labor resources in the economy due to institutional changes in the system of pension provision and the transformation of the system of social and labor relations, which determines the absence of a shortage in labor resources, as the main factor in production.
3. The standard of living, estimated through GDP per worker in the economy.

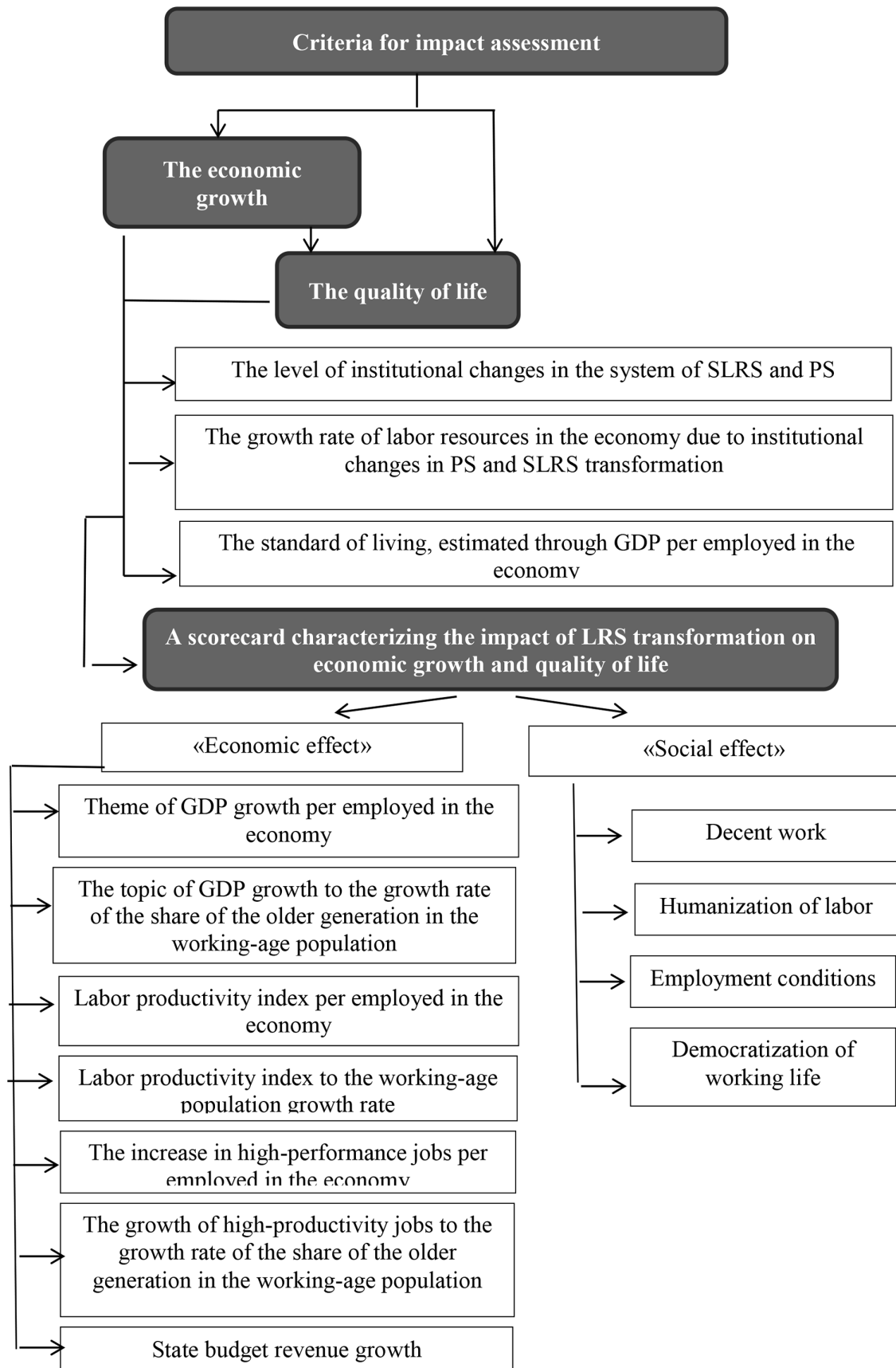
The system of indicators characterizing the effect of raising the retirement age, which determines the transformation of social and labor relations on the “quality of life of the population” and “economic growth” includes two groups of “economic effect”, “social effect”, which allowed the analysis of these categories in the context of labor changes relations in the context of pension reform and to identify a sustainable relationship between these processes. Thus, economic growth in the conditions of institutional changes in pension provision is achieved due to the “NOT transition” of workers from the system of social and labor relations to the pension system, while the “income level” of the SLRS subject and the “consumption level” are maintained (or increased). Their taxpayer status regarding income tax will be preserved, the transfer of the federal budget to the pension system will be reduced, etc.

Based on the systemic axiological research methodology, the authors come to the conclusion that in order to achieve economic growth (as an economic effect) and improve the quality of life of the population (social effect), it is necessary to exert a controlling influence on the process of transformation of the system of social and labor relations in the context of pension reform. It is necessary to correlate goals, objectives and value-semantic perception of the subjects of the system of social and labor relations and the subjects of the pension system. Therefore, the goals, objectives and axiological aspects of the transformation of the system of social and labor relations are due to the possibilities of finding equilibrium in this system based on the balance of economic (determining economic growth) and social (determining the quality of life) effects.

In the process of transformation under the conditions of changes in pension legislation, the system of social and labor relations can affect the quality of life of the population and economic growth in different ways. One of the consequences can be to ensure and improve the quality of life of the population and achieve economic growth due to the value-semantic adoption of change systems by all subjects. Or vice versa, the inhibition of processes (not leading to an increase in the quality of life and economic growth) as a result of a complete or partial value-semantic rejection of the ideas of pension reform.

During the study, the authors determined the conditions for the implementation of the pension reform in terms of raising the retirement age, which will positively affect economic growth and improving the quality of life of the population:

- formation (change) of a new system of values in social and labor relations, which has a mechanism for the proper institutional support of interactions based on a balance of interests of subjects of social and labor relations in the context of the implementation of the pension reform;
- digitalization of social and labor processes, assuming safe and favorable working conditions;
- a new value-motivational field of subjects of social and labor relations, determining the labor behavior of persons of pre-retirement age, ensuring staff commitment and contributing to the formation of the necessary responsibility in social and labor processes.



**Figure 3.** Criteria and a system of indicators characterizing the impact of the transformation of service stations on economic growth and the quality of life of labor relations in the context of pension reform

#### 4. DISCUSSION

The issue of the impact of pension reform in terms of raising the retirement age on economic growth and the quality of life of the population is discussed quite widely in the scientific sphere of Russia and Europe.

A number of analysts say that „pension reform will slow the recovery of economic growth.” This is difficult to justify in the general equilibrium model: an increase in the number of workers, even with a decrease in pension income, should usually lead to an increase in output or in the “overlapping generation” model. The system of indicators proposed by the authors based on the point of view that raising the retirement age leads to transformations in the system of social and labor relations and, accordingly, changes in the “quality of life of the population” and “economic growth” will most objectively reflect both positive and negative trends pension reform.

It should also be noted the possible negative social consequences of raising the retirement age, especially in Russia. So, according to the data in Table 1, with a sufficiently low life expectancy for men in Russia 66.5 years, their planned retirement age will be 65 years.

**Table 1 - Life expectancy in Russia and European countries**

Country	Life expectancy according to 2017, years		Retirement age by 2020, years	
	Men	Women	Men	Women
Bulgaria	71,1	78	64,1	61,2
Great Britain	78	82,3	65	65
Germany	78,7	83,4	65,7	65,7
Spain	80,1	85,5	65,3	65,3
Italy	80,5	84,8	66,7	66,7
Lithuania	68,1	79,1	63,2	61,4
Slovenia **	78	84,0	60	59,67
Finland	78,3	83,8	63,6	63,6
France	79,7	85,6	65	62
Sweden	80,7	84,0	65	65
<b>Russia</b>	<b>66,5</b>	<b>77,62</b>	<b>65*</b>	<b>60*</b>

\* transition period. Phased transition to the accepted retirement age. In 2020, in Russia, the retirement age of men was 61.5 years, women - 56.5 years

\*\* according to data for 2018

It is worth noting that highly skilled workers have fewer incentives to retire early – due to stronger income losses. An increase in the retirement age will strengthen, first of all, competition among less qualified older workers. According to professor Hosni Zoabi, the increase in the duration of the active economic activity of the population itself may not lead to economic growth or the accumulation of skills and human capital.

Periodic sources provide evidence that professional development programs are being developed for people of pre-retirement age, the amount of financing of which can amount to 5 billion rubles annually.

Of course, the content of these programs is ambiguous, and they do not cover the entire spectrum of necessary topics that allow you to build skills for working in the digital economy. There

are a number of expert estimates that indicate that an amount of 5 billion rubles will not be enough to educate everyone who has to stay in the labor market. At the same time, the capacity of the future labor market is not clear.

It is important that so far in Russia, salaries have mainly declined after 40-45 years. The new generation of pre-retirement age is likely to be quite qualified, and it is highly likely that employers will spend slightly less on their attraction than on younger workers. Theoretically, this could have a positive effect on investment and growth.

## 5. CONCLUSION

The authors revealed that raising the retirement age leads to a change in labor relations in Russia and Europe. The application of the proposed indicators can be used in the formation of a balanced state socio-economic policy in the field of institutional changes in the field of labor relations and raising the retirement age.

The impact of pension reform on the system of social and labor relations, causing another round of their transformation, can be traced in a number of areas.

Thus, the authors revealed and proved a stable relationship between the system of social and labor relations and the pension system through their subjects, as well as through the interdependent relationship of the institutional and axiological components of these systems.

Firstly, the positive aspect of this pension reform, which has raised the retirement age in Russia to 65 for men and to 60 for women, is that it will delay older workers in the labor market, which will have a small but positive effect on GDP countries and smooth out the negative effect of reducing the working-age population. At the same time, in the system of social and labor relations, growth of negative trends is forecasted by employees, both of the pre-retirement age and the younger generation [3].

Secondly, a change in the requirements of employers to employees towards greater flexibility in labor relations and adaptability to modern technologies is forecasted, since these trends are already visible today in the field of social and labor relations.

Thirdly, the burden on employers and employees themselves will increase in terms of advanced training. Currently, various state programs allow employees to undergo professional retraining and advanced training at the expense of the state budget. In the future, this obligation will fall on the shoulders of the employer and the employee himself.

Fourth, since, according to forecasts, there are general trends in the aging of the population and a decrease in labor resources, an increase in the economy's demand for the employment of older people is predicted, the implementation of the pension reform will allow employers to smoothly make this transition to the use of pensioners and pre-pensioners as part of their activities.

Fifth, it should be noted that according to research by a number of scientists [4], the younger generation is not afraid of raising the retirement age, but rather treats it positively.

Sixth, raising the retirement age will allow legalizing the work of pensioners, whom employers often have to transfer to a fixed-term employment contract, to civil law relations, and to apply various forms of informal labor relations.

However, it is necessary to notice that in addition to the positive aspects of the pension reform, negative trends are also predicted.

Firstly, the older generation, retiring in the context of the starting steps of the pension reform, has lower competencies for working in the digital economy, lower flexibility and adaptability, often weaker health, at least according to employers. These factors can lead to higher unemployment.

Secondly, even with the preservation of the workplace, a tendency towards a decrease in labor productivity is possible due to lower career aspirations than among youth, lower labor efficiency, and health problems.

Thirdly, the most vulnerable in the context of this reform is the category of public sector employees who have low wages and regard it exclusively as an increase in their pension.

It is obvious that these negative changes in the system of social and labor relations due to changes in pension legislation will have an impact on economic growth and on the quality of life of the population.

Thus, the relationship between the implementation of the pension reform and the transformation of the system of social and labor relations of enterprises, which affect both the quality of life of people of pre-retirement age and economic growth, is clearly traced.

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# THE FOREIGN INVESTORS AND NATIONALITY CONCEPT UNDER INTERNATIONAL LAW

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**Abstract:** *Although in the last years the international community has adopted a broad approach, the definition of foreign investors and foreign investments is still very important for the development of international investment law. The nationality of the foreign investor, whether a natural person or legal entity, sometimes is decisive, especially in front of the international jurisdictions. The paper tries to follow the examples from bilateral investment agreements as well as from multilateral instrument such as the International Centre for Settlement of Investment Disputes (ICSID) Convention. An important case concerning Bulgaria in past decades is also briefly discussed. The authors pay attention to some new moments re-developing the area of investment dispute settlement within the context of EU Mixed Agreements, especially after the EU-Canada Comprehensive Economic and Trade Agreement.*

**Keywords:** *Investment Agreements, ICSID Convention, EU Mixed Agreements.*

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## 1. INTRODUCTION

In recent years, the legal problems of foreign regulation have received increasing attention. This trend is due to the objective development of economic processes, especially in the 21st century, when investment flows generally increased international trade in goods and services together. At the same time, international investment co-operation acts as a catalyst for globalization processes at almost all levels of the economic development of the world.

International investment law belongs to the broader Public International law, as far as its rules are created on the basis of a voluntary agreement of States' will, and the relations it governs have public nature. The voluntary removal of economic borders agreed upon by States on a global scale poses phenomenal legal challenges. This is most evident in the very fact of the simultaneous interaction and the opposition between the international and national legal systems. Such confrontation is characterized by escalating conflicts over the jurisdiction of States. The latter is particularly relevant to the existing international arbitration mechanism for resolving investment disputes.

## 2. THE FOREIGN INVESTORS AND THEIR NATIONALITY

The main figure of this kind of legal relationships is a private investor, acting in the absolute majority of cases as a private subject (physical person or legal entity). The subject of legal relationships regulated by international investment law is direct investments whether material or in the form of intellectual property, the conditions of their access at the stage of pre-investment activities, legal regimes of foreign investments, their insurance, the order of resolution of investment disputes, etc.

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The contentious issues arising in foreign investment concern two crucial aspects: the first is the obstacles to the conduct of a foreign investor's business activities, for example, in the form of the deprivation of an investor's license to take a certain kind of activity, the introduction of new taxes; the second is the adoption by the host State of measures that deprive a foreign investor of the opportunity to carry out economic activities, for example in the form of nationalization. As a result, the aggrieved party seeks to recover their rights and to be compensated for the losses suffered. Historically, the protection of foreign investment has been carried out by mechanisms under Public International law. A foreign investor who had suffered damages in connection with the actions of the State in which their property was located could only resort to the diplomatic protection of their own State. And any dispute that arose was seen solely as a dispute between states. Tsirina (2017) found that „the protection of foreign property was based on the principle of state compensation for the nationalized property” (p.107).

The use of the term 'nationality' in relation to legal entities is more than conditional, as opposed to individuals. But this concept is used in the legal literature when it comes to determining the nationality of a legal entity, i.e. the domestic entities from foreign entities. The term 'nationality' became to be used in relation to legal entities in order to establish their relationship with the state.

The nationality of a legal entity is determined by the law related to the legal entity. Under the Private International law, the legal personality of foreign entities may be recognized on the basis of bilateral international treaties which sometimes contain colliding rules.

The question of the admission of a foreign legal entity to perform an economic activity in the territory of the host state is decided by the legislation of the latter. In most countries, such activities are possible when certain rules and conditions set by national law are implemented (direct method).

However, as a result of long-term international practice, general criteria have been developed for the qualification of the subjectivity of domestic or foreign law and order. Such is the theory of incorporation, the theory of settlement, the theory of the center of exploitation, the theory of control. Under the theory of incorporation, the main criteria are that of the establishment or registration of the legal entity. The company is governed by the law and order of the country in which it is established in accordance with its legislation. The same criterion for defining 'nationality' is often applied to the non-profitable foreign entities.

For the theory of an effective residence, the most important is the state where the governing bodies of the company (the board of directors, the other executive bodies) are located, and not where the business activity of the legal entity takes place. Belgium, Spain, Luxembourg, France, Germany and most EU Member States were among the countries that support such a legal position. According to the next theory, the determining place is the place where the legal entity conducts its economic activity. This criterion is accepted by most of the developing countries. The control theory has the greatest application in the sphere of government regulation of foreign investment.

As international economic investment expanded, the question of establishing the nationality of a legal entity was becoming more complex. Traditional ways of determining the nationality of a legal entity are not sufficient in the investment relationship between the host state and the foreign investor. For example, a legal entity established in accordance with the host State legislation cannot always be considered enough to demonstrate the domestic nature of the investor. This forced the international community to adopt a broader control criterion. The theory of

control, in general, is characterized by an individual approach to each case. Thus, in the case *Compania de Aguas del Aconquija, S.A. & Compagnie Générale des Eaux v. Argentina*, the host State challenged the jurisdiction of the ICSID arbitration because the entity (the plaintiff) did not have the status of a foreign investor. According to Farhutdinov (2013), “the ICSID determined control not on the basis of the *de jure* acquisition of shares, but on the fact of *de facto* management of the company” (p.181).

### **3. THE ESTABLISHMENT OF THE INTERNATIONAL CENTRE FOR THE SETTLEMENT OF INVESTMENT DISPUTES AND THE NATIONALITY CRITERION**

If the dispute cannot be resolved through negotiation, the investor’s choice may be referred to the competent court of the contracting party in which the investment is made or to the *ad hoc* arbitration court or to the court established under the UNCITRAL Arbitration Regulations, or to the International Centre for the Settlement of Investment Disputes (ICSID), established under the Convention on the Settlement of Investment Disputes between States and Individuals or legal entities of other states in 1965 (Tsirina, 2017).

It should be noted that in 1965, with the signing of the Convention on the Settlement of Investment Disputes between States and individuals or entities of other states (the 1965 Washington Convention), the International Centre for the Settlement of Investment Disputes (ICSID) was established. It has become a global arbitration institution, which aims to resolve disputes between private investors and recipient states. Based on an international agreement, the 1965 Washington Convention, ICSID has a special position in the system of non-state jurisdictions. On the one hand, the legal basis for ICSID’s work is an international treaty requiring states parties to comply with ICSID decisions as if they were decisions of the highest court of the state (Article 26). On the other hand, the mechanism proposed under the Convention has all the hallmarks of an international commercial arbitration court. The court consists of one arbitrator or any odd number of arbitrators appointed in the agreement of the parties. If the parties do not agree on the number of arbitrators and the order of their appointment, the court is formed as a member of three arbitrators, one of whom appoints each of the parties, and the third, who is the president of the court, is appointed by agreement of the parties (Article 37 of 1965 Washington Convention).

As stated in the legal doctrine (Yulov, 2017), “The main idea of the Convention is, through the establishment of a special investment dispute resolution centre ICSID, to organize the resolution of such disputes between foreign private investors and states that accept these investments internationally” (p.188). According to Article 2 of the Washington Convention, “The purpose of the Center is to provide structures for reconciliation and arbitration in connection with investment disputes between contracting states and individuals or entities of other Contracting States in accordance with the provisions of this Convention”. In both statements, the mixed public-private nature of the investment disputes is underlined.

Nevertheless, it is with the jurisdiction of ICSID to resolve legal disputes that arise directly from investment-related relationships. At the same time, the 1965 Convention does not disclose the meaning of the ‘foreign investment’ term. According to a very well-founded C. Schreuer’s commentary (2000), this concept cannot yet be developed because of the variety of forms, types and methods of investing but “it is, however, feasible to find our particular features of an investment within the Convention based on the ICSID case-law:

- the project ought to have a definite time span;
- there ought to be an established regularity of gain and return;
- there is often a certain risk for the two sides;
- the obligation involved needs to be fundamental;
- the action ought to be a considerable one for the host state's growth" (pp.139-141).

The author has shed light stating that the abovementioned features ought not to be inevitably perceived as jurisdictional demands but as distinctive characteristics of an investment (Schreuer, 2000, p.140).

The decision is binding on the Parties and is not subject to an appeal or other correction, except as stipulated in Art. 52, par.1 of 1965 Washington Convention, namely in cases where:

- The court was improperly formed;
- the court has exceeded its authority;
- there was a corruption of a member of the court;
- there has been a serious deviation from any substantive rule of procedure;
- the decision did not set out the considerations on which it was based.

To this extent, ICSID is a unique non-national regulatory body that serves as a 'line of defence' for foreign investors when disagreements arise with the recipient State.

Article 25(1) of the ICSID Convention defines that: "The jurisdiction of the Centre shall extend to any legal dispute arising directly out of an investment between a Contracting State [...] and a national of another Contracting State [...]". Regarding physical persons, Article 25(2) of the Convention considers "National of another Contracting State" as: "a) Any natural person who had the nationality of a Contracting State other than the State party to the dispute on the date on which the parties consented to submit such dispute to conciliation or arbitration as well as on the date on which the request was registered pursuant to paragraph (3) of Article 28 or paragraph (3) of Article 36, but does not include any person who on either date also had the nationality of the Contracting State party to the dispute".

The ICSID Convention demands applicants to initiate that they had the nationality of a Contracting State on two crucial dates: the date of permission to arbitration and the date on which the request was registered pursuant to paragraph (3) of Article 28 or paragraph (3) of Article 36, but does not include any person who on either date also had the nationality of the Contracting State party to the dispute. An extension of treaty rights to permanent residents cannot extend ICSID's jurisdiction beyond nationals of Contracting States to the ICSID Convention. As regards dual nationality, the ICSID Convention excludes dual nationals, if one of the nationalities is that of the host state (OECD, 2008, p.10).

The problems connected to the nationality of legal entities may even be more complex than for physical persons. Companies nowadays act in manners that could make it quite hard to define nationality. Variety of shareholders, both physical and legal entities themselves from different countries, established under the third state legislation and performing its major business in a fourth state nowadays is a common situation. That is why some bilateral investment treaties also include the test of control explained above. For example, the Netherlands-Bulgaria bilateral investment treaty entered into force on 1 March 2001 covers: "Legal persons not constituted under the law of that Contracting Party but controlled directly, or indirectly by natural persons

as defined in a) or by legal persons as defined in b)", (OECD, 2008, p. 26). However, courts have normally abstained from occupying in substantive investigations of a company's control and they have generally adopted the test of incorporation or location rather than control when defining the nationality of a legal entity.

With the development of international investment law, nonetheless, the nationality criterion has been deprived of some of its significance. As A. Broches (1965), one of the main drafters of the ICSID Convention observed: "... The significance of nationality in traditional instances of an espousal of a national's claim should be distinguished from its relatively unimportant role within the framework of the Convention. In the former case, the issue of nationality is of substantive importance as being crucial in determining the right of State to bring an international claim, while under the Convention it is only relevant as regards the capacity of the investor to bring a dispute before the Centre" (pp. 557, 579-582).

#### 4. *PLAMA V. BULGARIA* CASE AND THE 'DENIAL OF BENEFITS' CLAUSE

Hence, it is the common practice in investment agreements to particularly define the unbiased criteria that make a legal entity a national, or investor, for aims of the treaties, rather than to just count on the term 'nationality' and international law. As investors try to build their legal structure in their favour, states can also search beforehand to avoid claims from particular entities to whom a host state might not want to extend the treaty protection. Therefore, a few treaties themselves comprise 'denial of benefit clauses' permitting exclusion of investors in particular categories. The provision allows the host state the authority efficiently to obtain from the meaning of 'investor' shell companies owned by nationals of a third-country or the host state and companies owned by definite third-country aliens (OECD, 2008, p.28).

This question was raised in *Plama v. Bulgaria* (2005) decision of ICSID concerning the Energy Charter Treaty provisions for the interpretation of the definition of the 'denial of benefits' clauses. Considering the certain language of the ECT, the ICSID ruled against Bulgaria. As pointed by Gaillard (2005), who represented the claimant in this arbitration, contrasting most investment treaties, the Energy Charter Treaty's denial of benefits clause does not operate as a denial of all benefits to the investor. However, it is expressly restricted to a denial of some specific pros covered by Treaty. The question at stake was if the denial of benefits under Article 17(1) of the ECT operates automatically and demands no further action from the host state as argued by the respondent, or if it demands the right to deny to be exercised via positive action taken by the host state as argued by the claimant. In this case, Bulgaria, after it had received the request for arbitration, sent to ICSID a letter by which, under Article 17(1) of the ECT, it denied ECT protection to the claimant. This was done on the reasons that the claimant was "a 'mailbox' company with no substantial business activities in the Republic of Cyprus" (par.31) where it was incorporated and it was not owned or controlled by a national of an ECT state. In fact, the company was owned indirectly by a French individual. As regards Bulgaria's arguments, the tribunal concluded that Plama was ultimately owned by a French individual. France is a party to the ECT and, therefore, Bulgaria could not deny protection to Plama. Bulgaria also argued that the ECT's drafters meant to confer on a host state a direct and unlimited right of denial that might be exercised on any occasion and in any way. On the contrary, the tribunal made it clear "the existence of a 'right' is distinct from the exercise of that right..." (par.155). It additionally held that: "The exercise would necessarily be associated with publicity or other notice so as to become reasonably available to investors and their advisers. To this end, a general declaration

in a Contracting State's official gazette could suffice; or a statutory provision in a Contracting State's investment or other laws; or even an exchange of letters with a particular investor or class of investors" (paras.157-158). The Tribunal further considered that the exercise of this right should have no retrospective effect.

## **5. A NEW DISPUTE SETTLEMENT FRAMEWORK IN THE EU BILATERAL INVESTMENT AGREEMENTS**

After the Lisbon Treaty entered into force, the European Union (EU) has started negotiating EU-wide bilateral investment agreements with the inclusion of investment provisions in its free trade agreements. The Comprehensive Economic and Trade Agreement with Canada (CETA) is the first and foremost EU agreement that was signed by the EU comprising investment protection provisions. Investment provisions contain investment liberalisation measures as well as an investment protection framework with the addition of a dispute settlement mechanism. It is applied for disputes which arise between investors from the partner state and the host state. In the majority of the investment agreements, this investor-state dispute settlement implements an international arbitration framework. Puccio and Harte (2017) observed that "a few concerns raised by civil society regarding the international arbitration framework led the EU to commence a process in order to reform the arbitration provisions". As an outcome of a consultation on the Transatlantic Trade and Investment Partnership with the United States of America, the European Parliament sought their placement of international arbitration with a new system within the framework of EU trade and investment negotiations.

To this date, the new investment court system (ICS) has been already included in most recent free trade agreements entered into by the EU, while suggested in others currently in negotiation. Accordingly, in September 2015, the European Commission's draft text of the Transatlantic Trade and Investment Partnership, which was complemented in November 2015, constituted the first international investment agreement to include the ICS as the mechanism of dispute settlement. Subsequently, in January 2016, the ICS was implemented in the EU-Vietnam free trade agreement, followed by the EU-Canada Comprehensive Economic and Trade Agreement in February 2016. More recently, in April 2018, the ICS has been incorporated in both the EU-Singapore Investment Protection Agreement and the EU-Mexico Trade Agreement.

According to Marin and Paskaleva (2020), thus the EU and Canada renegotiated CETA and established "a new investment court system". Whilst procedurally the framework stays similar to the revised arbitration procedure of the first CETA draft, the ICS itself departs substantially from the arbitration model. The ICS is made up of a tribunal and appellate body. Contrary to the arbitration framework, parties to the dispute shall not be capable of selecting their tribunal members. They would instead be chosen on a rotational basis by a group of judges, appointed for a definite period of time by the CETA Joint Committee.

Due to the low number of cases and to comprise the cost of establishing an ICS, CETA uses the International Centre for Settlement of Investment Disputes as an administrative secretariat, charged with providing organisational and logistical assistance for the ICS proceedings. The alteration to an ICS has been welcomed by a few parties formerly critical of arbitration, but which were open to reform. Nevertheless, a few of the acclaimed system innovations shall be decided exactly after the establishment of the court (such as the code of conduct), and developments shall thus be observed.

For those supporting arbitration, the switch to an ICS is a compromise, that keeps the international investment law dispute settlement framework (though the investor has no say in choosing the tribunal members, as it did under arbitration). The major opposition to the ICS comes from the ones who mainly were in favour of a domestic approach to such disputes. According to Puccio and Harte (2017), “The ICS is an international court and provides an international route for the protection of foreign investment that is different from the human rights route which is open to domestic investors”. Criticisms would perhaps go on in the discussions on a proposed multilateral investment court. Supporters of the domestic approach have also expressed doubts concerning the compatibility of the ICS with the principle of autonomy of the EU legal order. However, the ICS may be differentiated, for different reasons, from past CJEU opinions related to the autonomy of the EU legal order.

The CJEU is not so much concerned with an actual conflict between EU law and international investment law. It is more concerned that a dispute which may potentially include issues of EU law is removed from EU courts (Ankersmit, 2018). To this extend, *Achmea* judgment raises some tension within the EU concerning the autonomous EU legal order as it means the enforcement of decisions coming from investment tribunals before courts of EU member states might become legally impossible.

It should be noted that the European Commission has taken some measures in the last negotiated agreements such as the CETA. This was done because already in Opinion 2/15, the CJEU found that an international dispute settlement mechanism in the EU–Singapore free trade agreement removed disputes from the jurisdiction of EU Member States.

Finally, as Vidal Puig (2019) has concluded *Achmea* and Opinion 1/17 have provided much-needed clarity. Contrary, Ankersmit (2018) considers it as the beginning of the end for the international dispute settlement in and with Europe. What can be summarized is that *Achmea* has confirmed that an intra-EU investor-state dispute settlement is inherently incompatible with the Treaties. In turn, Opinion 1/17 has confirmed that an extra-EU Investor-state dispute settlement is, subject to particular conditions, in harmony with the Treaties. These agreements may be distinguished from intra-EU bilateral investment treaties and are compatible in principle with EU law (Vidal Puig, 2019, p.25).

According to Opinion 1/17, the CJEU decided that the investment court system is compatible in principle with the European Union law. The ruling examined the envisaged in CETA procedure. However, the Court’s reasoning is uniformly relevant to different investment protection agreements with Singapore and Vietnam. The consequences were beyond clarity, bearing in mind the fact that in the past the accession to international dispute settlement bodies had to comply with the autonomy of the European Union legal order.

## 6. CONCLUSION

The current study reveals the notion of the foreign investors and the concept of their nationality in theory and the existing ICSID case-law. The establishment of the ICSID under the 1965 Washington Convention was a successful step towards the international framework for investment disputes resolution. An important contribution to the formation of the global institutional system in the sphere of foreign investments could be the evolution of the EU bilateral investment agreements such as CETA, and the establishment of the new investment court system.

The legal regulation of foreign investment on a fair and equitable basis is impossible without the harmonious interaction between national and international mechanisms, as well as the development of the EU law.

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# POTENTIAL FOR THE DEVELOPMENT OF THE SILVER ECONOMY UNDER THE CONDITIONS OF THE SLOVAK REPUBLIC

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**Abstract:** *The economic behaviour, needs and preferences of people vary in the individual phases of their lives. The silver economy market is made up of consumers, employees or employers aged 50+. The share of this population is an important target group for entrepreneurs, brings a wide range of new products and services to businesses and has a significant role for the national economy as there is a change in the understanding of the ageing process from a threat towards economic opportunities. Although the ageing workforce and seniors in the Slovak Republic do not represent a strong demand for market goods yet, their economic potential may not be negligible. The rapid ageing of the Slovak population represents, among other things, an economic potential that can be exploited in favour of innovation and improvement. Despite not a high level of pensions, seniors have considerable purchasing power, which will generate an increasing demand for specific goods and services, which is an opportunity for the labour market. In this paper we try to describe selected areas in which the silver economy and the ageing population itself should be viewed as a challenge to new business opportunities. In particular, these include health service and health care, spa care, the pharmaceutical industry, tourism, the financial sector and, last but not least, construction industry. The silver economy will change the rules of market forces in existing sectors and create a wholly new industry at the intersection of demographic and technological changes with a high export potential.*

**Keywords:** *Silver economy, Aging, Economy, Labour market, Development areas.*

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## 1. INTRODUCTION

In recent decades, the European Union has seen intensive population ageing, mainly due to increasing life expectancy and low birth rates. Population ageing is an important concept for the future. For society, this is a big step forward. Over the past 50 years, life expectancy at birth in the European Union countries has increased by an average of 10 years and the birth rate has decreased, while it is estimated that by 2050 the share of Europe's population in the total population will decrease to 5%. Extending human life can be described as a success of the 20th and 21st centuries, but at the same time it is becoming a serious threat to the sustainability of public spending in the area of pension system, health care and social services. The increasing number of elderly people raises a number of new challenges, whose potential and solutions are being sought only gradually. Ageing is considered to be one of Europe's major challenges in the coming years, as it will affect competitiveness, economic growth and employment. The silver market can be seen as a strategic area of social integration activities, maintaining independence and promoting individual security, thus enhancing the quality of life of elderly people. The impact of ageing will gradually be reflected in the national economy, in the context of changes in supply and demand for services, products, labour force, to which the economy and businesses will have to respond with their solutions. Specializing in the needs of the silver economy would not only have a positive impact on the economic growth of the Slovak Republic, but would also mitigate the sensitivity of Slovakia to the business cycle due to the lower sensitivity of the silver economy's demand to its course (Dovaľová, 2011). Until recently, manufacturers have not considered the generation of 50 years or more to be a sig-

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nificant market potential and products and services for this age category have not been favoured on the market. It is thanks to ageing fellow citizens that the market creates space that, with the right attitude of many companies, can quickly meet the increasing demand of silver consumers (Páleník, 2015). The change in consumer behaviour will also be triggered by a change in disposable income as well as a change in economic growth, the development of savings and, of course, the development of the purchasing power of the population. It is necessary to become aware that the silver generation has different requirements to meet their needs compared to the younger generation.

An ageing population is an important incentive to generate technological and social innovation. According to the Bonn Declaration (2005), the silver economy represents the potential for new and innovative products and services for a higher quality of life in old age. The European Commission (2015) defines the silver economy as an economy of opportunities stemming from public and consumer expenditures related to the ageing of the population and the specific needs of the population over 50 years of age. According to Eurostat, the silver economy represents the development and marketing of innovative products (goods and services) intended for the elderly. Deutsche Welle (2005) defines it as an adaptation of the economy to the future needs of a growing number of elderly people, thus creating new market opportunities.

In the context of the silver economy, we call the silver population a group of consumers aged over 50 years. Seniors are called people over 65 years of age. The elderly population is divided by Páleník (2012) in Slovakia into three age groups:

- 50–64 years - young-old,
- 65–79 years - middle old, seniors,
- over 80 years - very old.

The aim of the paper is to point out the potential of the silver economy for the labour market in the Slovak Republic as well as the necessity of the society to react quickly to new socio-economic phenomena in the society. Increasing demand of the silver persons for goods and services creates ever-increasing pressure to create new jobs.

## **2. SILVER ECONOMY IN THE AGEING CONTEXT**

In Slovakia, life expectancy has increased by 2.3 years for women and 3.4 years for men over the past decade. We rank among the top 10 countries of the European Union, where the most significant extension of life occurred in the period from 2006 to 2016. In general, men live shorter than women. In the case of Slovak men, it is approximately 7 years less than the life expectancy of Slovak women. The average gender difference in the European Union is 5.4 years. The life expectancy of women at birth is less than 81 years in our country and for men it is less than 74 years. Life expectancy is constantly increasing in particular thanks to the latest medical, technological and scientific discoveries. Overall, the conditions have improved that resulted in people living longer.

According to Vladimír Baláž (2011), in 2035 the share of youth will be only 18.2%, while the share of people over 65 will rise to 21.1%. Ageing will continue at a very rapid pace and in 2050 the proportion of seniors will rise to 28.4%. This share is expected to increase to 30% by 2080. The share of the oldest persons (80+ years) will increase even further from 5% in 2014 to 12% by 2080. Slovakia is gradually changing from a relatively young country to one of the oldest in the European Union. The dynamic with which the number and proportion of elderly people increase and will increase is changing.

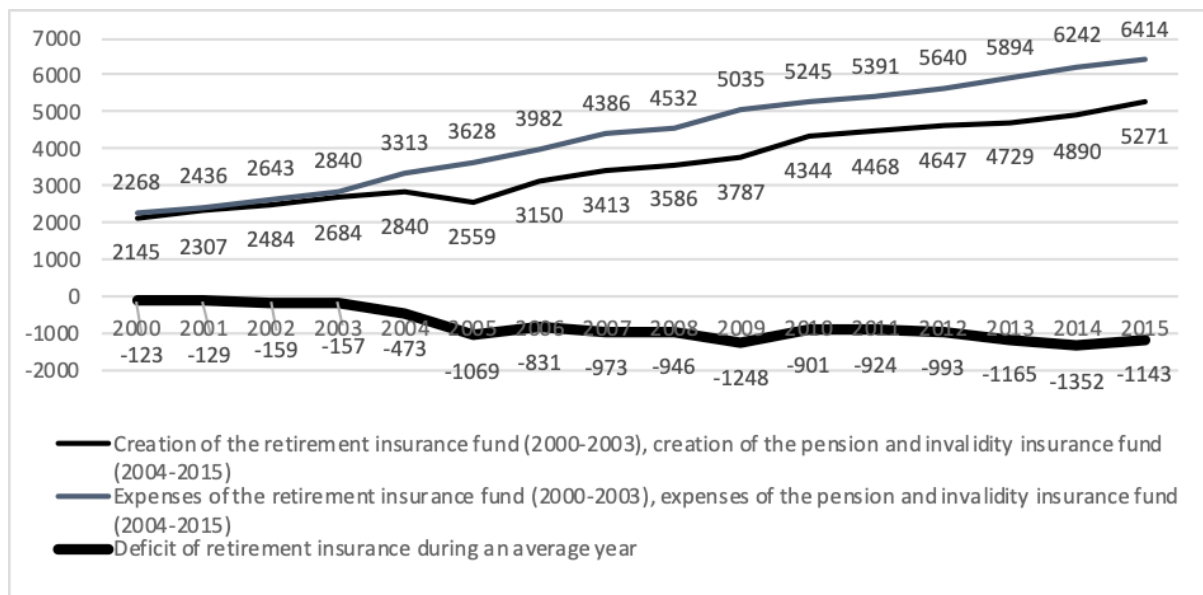
**Table 1.** Life expectancy in selected countries of the European Union

EU country	Life expectancy - women			Life expectancy - men		
	2006	2016		2006	2016	
France	84,5	85,7	1,2	77,3	79,5	2,2
Italy	84,2	85,6	1,4	78,5	81,0	2,5
Finland	83,1	84,4	1,3	75,9	78,6	2,7
Sweden	83,1	84,1	1,0	78,8	80,6	1,8
Austria	82,8	84,1	1,3	77,1	79,3	2,2
Greece	81,9	84,0	2,1	77,2	78,9	1,7
<b>EU</b>	-	<b>83,6</b>	-	-	<b>78,2</b>	-
Germany	82,4	83,5	1,1	77,2	78,6	1,4
Czech Republic	79,9	82,1	2,2	73,5	76,1	2,6
Poland	79,7	82,0	2,3	70,9	73,9	3,0
<b>Slovakia</b>	<b>78,4</b>	<b>80,7</b>	<b>2,3</b>	<b>70,4</b>	<b>73,8</b>	<b>3,4</b>
Hungary	77,8	79,7	1,9	69,2	72,6	3,4

Source: Poštová banka according to Eurostat data

We can look at the ongoing demographic change from several points of view. The first considers the elderly generation as a burden on society, as the demands on the pension system as well as on the health system continue to rise.

Spending on pension benefits has more than tripled over the past 15 years, which has a major impact on the sustainability of the pension system.



**Figure 1.** Deficit of pension insurance in the current year for the period 2000 to 2015 (in mil. EUR)

Source: Own processing based on data from the Social Insurance Agency

Total expenditure on health care is also growing sharply, in 2019 health expenditure reached EUR 5.2 bn, which represents 5.8% of GDP.

This view creates tensions between generations and increases the pressure to reduce solidarity in insurance systems. For this reason, there is an ever-increasing demand for increasing the levy on the population and strengthening subsidiarity.

The second view focuses on the silver economy as a significant potential for future economic growth. This will be particularly evident in the increased need for products and services of various kinds specifically targeted at the senior generation, as well as the participation of elderly people in the labour market. However, their applicability in the labour market will create pressure to adapt working conditions to their specific conditions and health status, as well as attention to adjusting the tax-levy barriers to their work. Elderly workers can be of benefit to employers as a result of years of work experience, maturity and lower turnover compared to the younger generation (Páleník et al., 2012). Seniors also contribute significantly to the overall performance of the economy even in the context of unpaid labour, which is not reflected in the macroeconomic GDP indicator. It includes a range of activities outside the official labour market that are not financially remunerated and represents any activity that uses economic resources to meet needs - domestic work, care for children and other dependents, work in voluntary organizations, assistance in a family business, etc. (Kaščáková, Kubišová, 2016). These activities contribute to maintaining an adequate standard of living and health for the elderly, but also to the cohesion of families and communities, which has a high social value, although financially difficult to quantify.

The economic behaviour of elderly people contributes significantly to creating a sustainable revitalization of the economy. If the current trend continues, elderly citizens will be healthier and more active, but provided that their financial situation is better. According to research by the Austrian Chamber of Commerce, around 74% of people over 55 are quality-conscious, meaning they are willing to pay more for services and products (WKÖ, 2009). Recent statistics show that within the European Union countries, people over 50 years hold 75% of shares at stock exchanges, 65% of private savings, 60% of homes, 50% of cars and about 80% of luxury cars. However, only 8% of them plan to put some money aside for their children, 55% of persons want to spend their savings for themselves and for leisure activities. The silver market is attractive not only for the number of seniors, but also for its size of purchasing power. Purchasing power is an important indicator of the attractiveness of the market segment. It depends on several factors, such as the size of the net income of the household of the elderly and the size of the accumulated capital.

**Table 2.** Relation of the average amount of old-age pension to the average wage in the national economy of the SR

Year	Average amount of old-age pension as of 31 December (in EUR)	Average monthly wage in the national economy of the Slovak Republic (in EUR)	Share of average wage in average old-age pension (%)
2009	339,73	744,50	45,63
2010	352,54	769,00	45,84
2011	362,08	786,00	46,07
2012	375,89	805,00	46,69
2013	390,51	824,00	47,39
2014	400,18	858,00	46,64
2015	411,06	883,00	45,55
2016	417,46	912,00	45,77
2017	428,31	954,00	44,90
2018	444,26	1 013,00	46,86

**Source:** Own processing based on data from the Social Insurance Agency and the Statistical Office of the Slovak Republic

Despite the annual growth in old-age pensions in Slovakia, their ratio to the average wage in the national economy is decreasing. Over the last ten years, there has been a decrease of 1.77%. While in 2009 the average old-age pension accounted for 45.63% of the average wage in the

national economy, in 2018 it was only 43.86%. This means that the reimbursement rate was continuously decreasing between 2009 and 2018. The decline in the share of the average old-age pension in the average wage was due to a slower growth than the average wage growth.

While the average pension increased by 30.93% in 2018 compared to 2009, the average wage increased by 36.07% over the same period. The average wage lagging behind in the national economy causes the number of pensioners participating in the labour market to rise steadily. In August 2019, there were 244,412 such pensioners, representing almost 20% of the number of pension beneficiaries. This is due to the efforts of pensioners to increase their standard of living and to fill their free time, which opens the door for the silver economy. Seniors and their purchasing power are an important determinant for exploiting the potential of the silver economy.

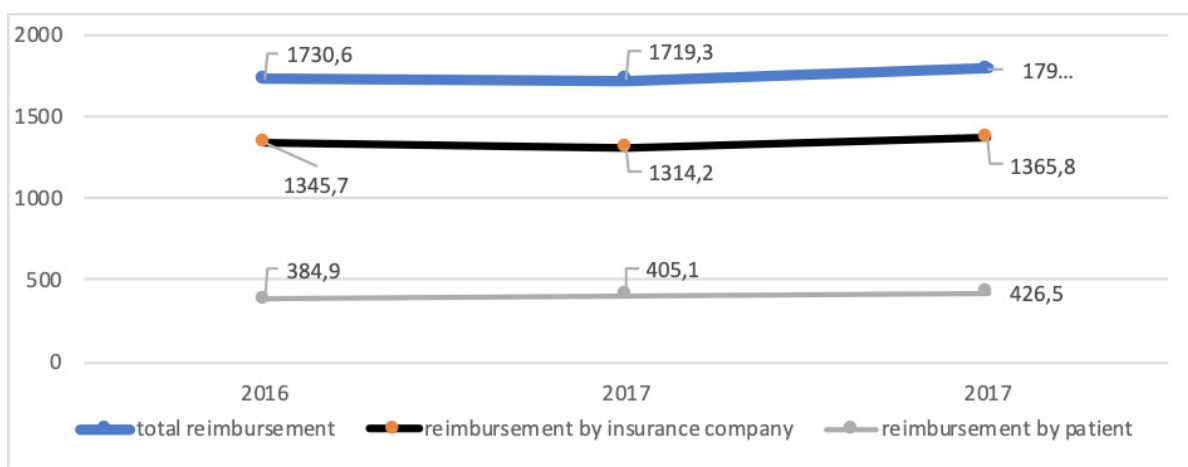
### 3. SELECTED DEVELOPMENT AREAS FOR THE SILVER ECONOMY NEEDS

The present generation from the age of 50 is now more educated and modern, healthier, and it prefers different values in life than generations a few years ago (Setnická, Szüdi, 2016). National economies and businesses need to respond to this fact. For this reason, we will draw attention to selected areas of development that should respond to the ageing population.

#### 3.1. Pharmaceutical industry

In Slovakia, the most common causes of death were diseases of the circulatory system, tumours, injuries as well as diseases of the respiratory and digestive systems. The pharmaceutical industry, as well as pharmacies and facilities selling medicines, can be clearly identified as prolonging the lives of the population. As the ageing trend continues, the pharmaceutical industry will play an important role in both job creation and economic benefits.

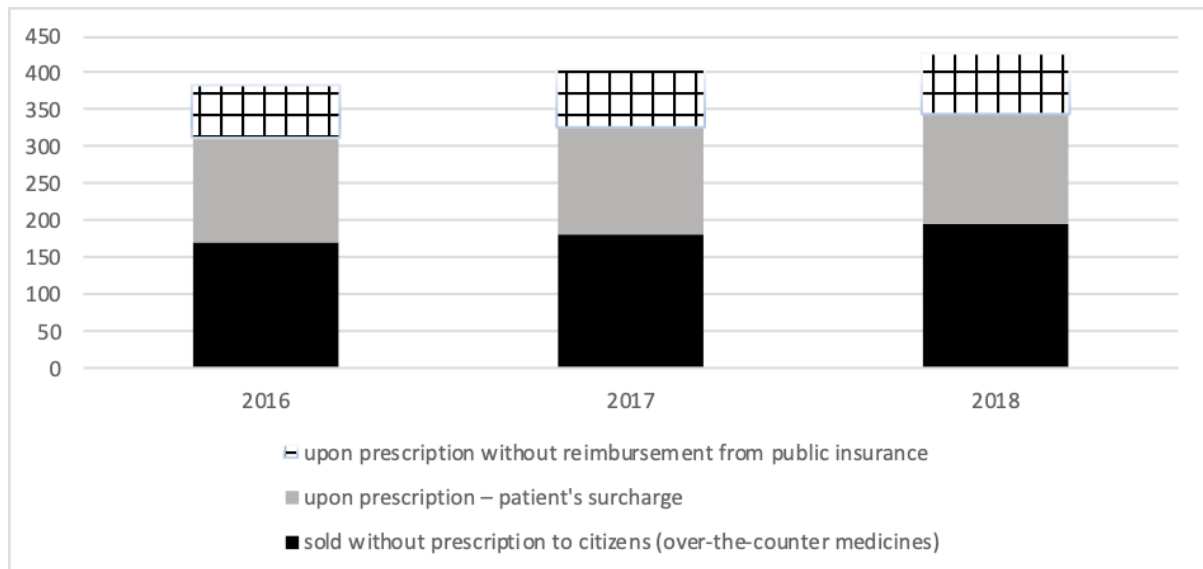
Total consumption of medicinal products for human use in the Slovak Republic in 2018 increased by 4.2% compared to 2017 to EUR 1,792.2 mil. in terms of financial reimbursement for dispensed medicines. In this, the reimbursement of the health insurance company amounted to EUR 1,365.8 mil., which represents an increase of 3.9% compared to 2017. There was also an increase in patient reimbursement for medicines. In 2018, it was EUR 426.5 mil., i.e. 5.3% more than in the previous year (www.nczisk.sk).



**Figure 2.** Consumption of dispensed medicines by reimbursement (in mil. EUR)

Source: National Health Information Centre

At the same time, there was also an increase in the reimbursement of the patient for over-the-counter medicines, where the reimbursement increased year-on-year from EUR 181.9 mil. to EUR 197.0 mil. (+ 8.3%), the number of surcharges for prescription drugs increased from EUR 146.4 mil. to EUR 148.5 mil. (+ 1.5%) and payments of patients for prescription drugs without reimbursement from public health insurance from EUR 76.1 mil. to EUR 80.5 mil. (+ 5.8%).



**Figure 3.** Consumption of medicines by type of dispensing (in mil. EUR)

**Source:** National Health Information Centre

There were 80.3 mil. prescription drug packs, which is 0.9% less than in 2017. Purchase of over-the-counter medicines increased from 38.4 mil. in 2017 to 40.4 mil. packs in 2018 (increase of 5.2%).

Various types of medical devices were also sought, the amount of which in packs/pieces increased by more than 2.7 mil. during the year. Thus, in 2017, the health insurance companies paid EUR 193,486,064.8 for 131,206,487.9 packs/pieces of medical devices and the patient's surcharge was EUR 8,731,282.0. The number of pieces/packs of medical devices has increased by 14.3% over 3 years. An upward trend can also be expected in the future.

The pharmaceutical industry will play an increasingly important role in maintaining the health of the silver persons, which is its potential in terms of job creation in the research and distribution of pharmaceuticals.

### 3.2. Health care

As people get older, their health is also deteriorating, leading to an increased reliance of the elderly on health care and assistance from others. For this reason, it is a great challenge for the future to create new, modern healthcare facilities that would be a significant help in the health and social care of the silver generation. This will lead to the creation of new jobs, e.g. for nurses, doctors, rehabilitation workers, etc.

The government must focus on ensuring that elderly seniors in rural settlements have the same access to the quality of social and health care as residents in urban settlements. An important role will be played here mainly by e-health, which has started to develop slowly in the Slovak

Republic. However, the social and health services sector is heavily dependent on considerable financial resources. One solution would be the efficient use of funds collected through health insurance as well as the introduction of care insurance.

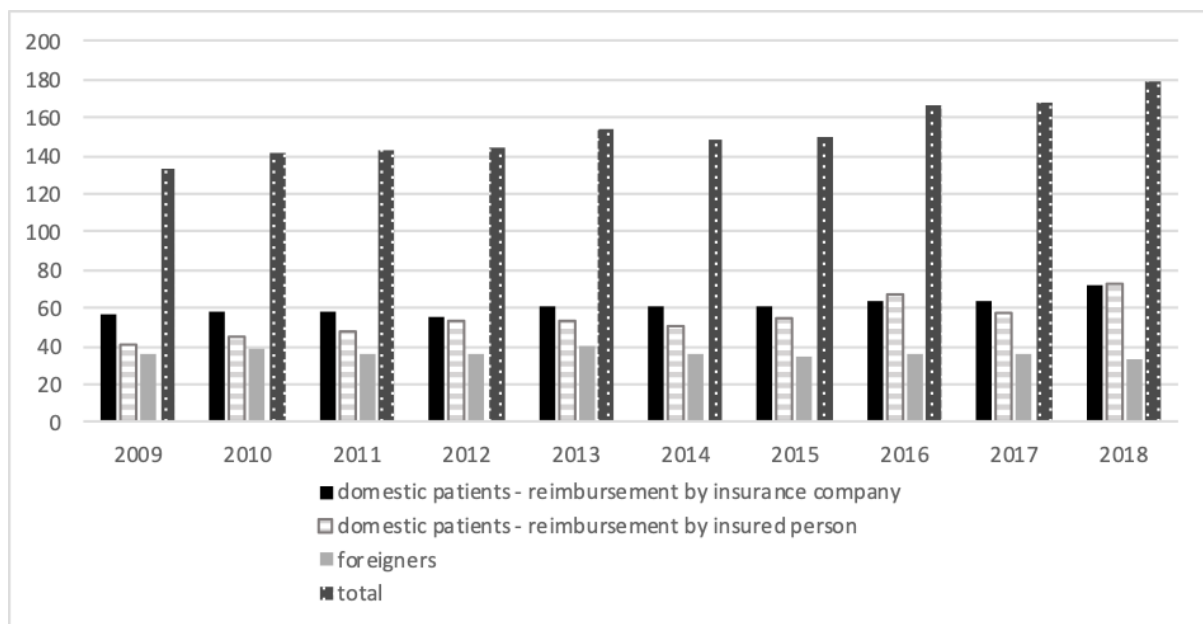
**Table 3.** Number of jobs in selected areas

Jobs	Outpatient health care		Institutional health care, including outpatient care	
	2016	2017	2016	2017
doctors	7 915,79	7 497,84	9 176,61	9 234,47
nurses	9 687,96	9 311,81	20 584,20	20 381,36
physiotherapists	685,67	596,83	1 195,74	1 192,34
paramedics	1 471,40	1 509,83	92,52	92,35
medical orderlies	346,15	296,93	4 406,84	4 386,13

Source: National Health Information Centre

### 3.3. Spa care

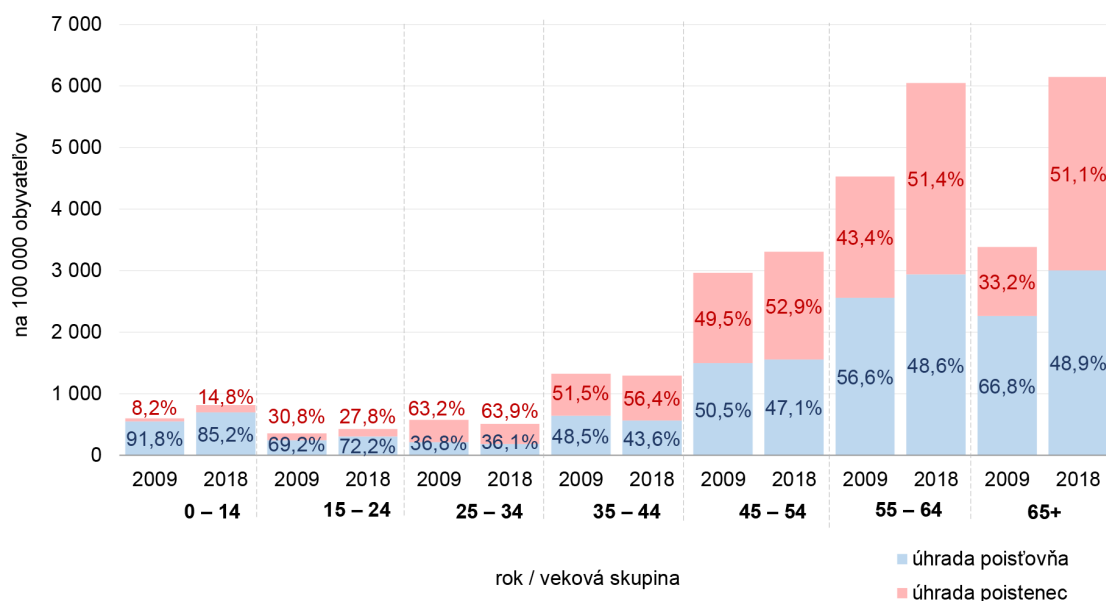
The spa industry is a typical silver industry, as the average age of spa care clients is currently at the level of 45–55 years. Last year, 30 healthcare facilities provided spa treatment with 145,830 patients residing in the Slovak Republic. In the year-on-year comparison, the number of cured domestic patients increased by 10.9%.



**Figure 4.** Development of cured patients in spa care (thous.)

Source: National Health Information Centre

According to pre-November plans, 16,000 spa beds were to be built in Slovakia in 2000. However, growth stopped at 10,500 in 1989, which is broadly in line with the today's situation. The trend of ageing is also reflected in the number of people cured, which has increased in domestic patients by up to 48.4% over the last ten years. Spa treatment in 2018 was most often used by people aged 65 and over. In this age category, there was also the biggest increase in the last ten years (+ 81.6%), while according to the payment of the stay there was a significant increase in the number of stays paid by patients (+ 179.7%) compared to stays paid by the insurance company (+ 32.9%). The increase in stays of patients aged 55–64 was 33.5%. This increase was mainly due to an increase in stays of up to 7 days.



**Figure 5.** Number of persons cured in spa treatment by age groups and stay payment, 2009 and 2018)

**Source:** National Health Information Centre

From the adult perspective, spa care was provided mainly for locomotive organs diseases (69.6%), non-tuberculous respiratory diseases (14.2%) and circulatory system diseases (5.6%). (National Health Information Centre, 2019)

The unsatisfactory financial situation of the silver generation is also reflected in the length of the spa treatment, as the highest increase compared to 2009 (+ 9.1%) was recorded for stays of 4–7 days. The biggest drop in the share was seen in stays of 15–21 days (from 22.0% to 13.7%). To a greater extent, the insurance company pays to the residents longer stays over 15 days. Stays up to 14 days are paid mostly by the insured person.

The success of the spa industry can also be monitored from the outcomes of the treatment, as up to 89.8% of patients completed their treatment stay with improved health status and the health status of only 9.2% of patients remained unchanged.

As a country with an excellent geographical location and a large number of mineral and thermal springs, Slovakia has excellent conditions for the development of the spa industry. However, the question remains whether the Slovak Republic can also sufficiently exploit this potential in the context of the ageing of the population and their specific requirements focused on their areas of development.

### 3.4. Tourism

Tourism is an economic activity that is capable of generating growth and jobs, while contributing to the economic and social development and integration, and it can significantly reduce regional disparities. The share of tourism in GDP was 2.5% in 2012, while in the EU countries tourism generates more than 5% of GDP, which means that Slovakia is significantly below this level (Ministry of Transport, Construction and Regional Development of the SR, 2013). In this respect, the Slovak Republic has significant room for growth in the sector compared to the EU average.



As part of the research on consumer behaviour in tourism Van den Berg et al. (2011) found that there is a higher proportion of seniors in tourism activities because of better financial security than in the younger age categories, which are financially burdened with higher housing and living costs.

European tourists aged 65 and over spend an average of EUR 53 per day. Pensioners, especially those with higher incomes, create higher demands on leisure activities and more active life, which is also reflected in domestic tourism. The provision of free transport on Slovak railways also significantly helps them in this area, which is reflected in the growing interest of passengers in this mode of transport. According to the Ministry of Transport, the introduction of free travel has allowed defined groups of people to travel where they could not afford it previously. Free rail travel is mainly used by pupils and students (48%) and pensioners (36%), the rest being children under 15 and citizens over 70.

However, the significant tourism potential in itself does not guarantee a high visit rate of the destination. One of the leading factors is the high level of quality of the services provided as well as the creation of specific products for domestic tourism focused on the silver persons.

Among the factors that are important for elderly people when deciding whether to spend their holidays again in the same place are in particular natural scenery and weather (42%), quality of accommodation services (28%), cultural and historical landmarks (28%). For elderly people, the accessibility factor for people with special needs (wheelchair accessibility, etc.) was also decisive compared to the younger age group. (Páleník, 2015)

Focusing tourism on seniors creates the potential for tourism entrepreneurs to eliminate losses due to the seasonality of tourism.

### **3.5. Financial sector**

Despite several reforms of the Slovak pension system, reliance solely on the first pillar pension is not quite correct. This situation is mainly due to an ageing population and low birth rates. According to economist Baláž, today the state pension is paid from Pillar I at approximately 46% of gross wage, but in the future, it will decrease significantly and may fall to 30%. This unflattering fact forces the current pension beneficiaries to decide to continue in participating in the labour market. The number of people still active and working at retirement age is constantly increasing. By the end of August 2019, there were 257,719 of such people. It is 13 thousand more than in August 2018, when 244,412 pensioners worked. Of the 257,719 working pensioners in August 2019, 152,451 were old-age pensioners, 1,713 early old-age pensioners and 103,555 disability pensioners.

The risk of longevity and the increasing number of pensioners is an opportunity for areas such as insurance, reinsurance, property management and asset management, and many other areas.

Based on an analysis of Poštová banka on a sample of more than half a million clients, people over 50 have an average of EUR 5,678 in deposit products. The highest savings (EUR 7,425) are available to pensioners aged 60–64, 30% more compared to the average. In the long-run, the most popular products have been fixed term deposits. Up to 66% of all savings of people over 50 years are deposited on both blocked and unblocked fixed term deposits. On these types of products, the average deposit amounts to more than EUR 12,000. Bankbooks are also still very

popular, accounting for nearly a third (32%) of all mature generation savings. The average deposit amount is EUR 2,368. The oldest clients over 75 years old have the lowest average savings of EUR 3,233. (Poštová banka, 2017)

When people get older, their health care spending is increasing and, in view of the expected inflationary tensions, also the cost of living. Until now, the only possibility for seniors in Slovakia to get more financial resources has been selling their real estate, which is often a painful decision for property owners. A promising solution to this situation would be the introduction of a reverse mortgage under our conditions, as it is the case in some EU countries. A reverse mortgage takes the form of a financing agreement between the reverse mortgage lender and the borrower, which allows the elderly to convert the fair value of their property into a loan in the form of cash advances that do not require any repayments in the future. In parallel, the debtor is allowed to remain in the property until he dies, sells the property or permanently moves. Lenders are interested in offering this financial product because it represents a significant potential given the high number of elderly property owners with a relatively low risk of generating financial loss. (Husáková, Rievajová, Sika, Šipikalová, 2018)

Due to the conservative nature of Slovak seniors and strong family ties, a reverse mortgage is not a solution for all seniors. We consider a reverse mortgage to be a product suitable for a particular segment of the senior generation, namely for those who find themselves in borderline emergency situations when they own real estate but do not have enough income for normal life or are in danger of being subject to execution proceedings connected with the definite loss of property. This form of mortgage can be an acceptable solution even for lonely seniors without strong family relationships and with a strong desire to stay for the rest of their lives in the home environment and through a reverse mortgage also the ability to pay for a larger range of home care services, respectively, other field social services. (Husáková, Rievajová, Sika, Šipikalová, 2018)

### **3.6. Construction industry**

The silver economy also creates opportunities for the construction industry. Many of today's seniors live in households that often do not meet their specific requirements for both practical activity and safety. Flats adapted by their disposition and services for seniors will be more in demand in connection with ageing and weakening of the role of the family. Based on this fact, Senior Park a.s. has been established in the Czech Republic, which already operates its facilities in six locations and ranks among the major providers of housing for seniors and persons with reduced mobility.

The silver persons also create the potential for the construction industry in adapting real estate to the needs of elderly people. Housing adjustments are often dealt with by residents only when they have movement or other constraints, instead of being prepared in advance for this situation.

Slovak seniors have a large part of their capital deposited in real estate. These seniors could also improve their standard of living through the release of part of the capital blocked in real estate for the benefit of living standard growth. However, this would mean selling their property and moving to a smaller property or rental apartment. It should be noted, however, that rental housing in Slovakia almost does not exist and therefore cannot be used for the benefit of seniors. The truth is, however, that seniors are not inclined to sell their own property either, as they prefer intergenerational property transfer regardless of their income situation. The released

capital would also be of benefit to society through excise tax revenues, by enabling the elderly to purchase services that help them continue to live in their real estate, and by starting a housing policy in favour of younger households.

#### **4. CONCLUSION**

Population ageing, global warming and globalization are major challenges facing the European Union countries in the coming years to decades. The Slovak Republic will be one of the oldest countries in Europe. In the case of the Slovak Republic, the possibilities of dealing with the ageing of the population through immigration encounter the current unattractiveness of our country for migrants. The reforms undertaken by the Slovak Republic in the area of pensions do not create sufficient space to shape the consumer demand of seniors, as the current generations of seniors do not have sufficient financial resources to meet their needs through the market, so they are forced to meet their needs both through their family and self-help. This fact will lead to a shift towards discounted retail sales, to equity products, to a preference of the home environment to restaurants, to a reduction in non-essential spending and, generally, it is necessary to expect higher price sensitivity (Deloitte, 2011).

Several economists view ageing as a future threat that awaits the Slovak Republic. A smaller proportion of economists see an opportunity in the ageing process, both for the economy and for the business environment. The silver economy is a system in which elderly people are considered an active, productive and socially useful group. It draws attention to the benefits of using the professional experience of elderly people. Faster ageing, a higher number of elderly people with no high pensions will in the near future put a strong pressure on the business environment to create jobs intended for the elderly generation as well as jobs related to changing consumer behaviour and higher demands to meet the needs of the senior generation. If the Slovak Republic captures the trend of the silver economy, it will clearly contribute to increasing the quality of life of seniors as well as the quality of life of the whole society. The silver economy is a challenge and a chance for business entities to dynamically and innovatively develop their activities while accepting the specific needs of the senior generation.

Innovative disciplines such as nanoscience, biotechnology, robotics and artificial intelligence will generate high profits from the products produced, thereby contributing to improving the active life of the senior generation. Elderly people can stay active for longer, making them useful to society. We should stop viewing the silver generation as a burden, but as a resource of economic opportunities. However, it is necessary to create the so-called partnerships between the public and private sectors, since the silver economy affects all areas of life, thereby we will contribute to improving the quality of life for elderly people.

#### **5. ACKNOWLEDGMENT**

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# GREEN BONDS AS AN INSTRUMENT FOR FINANCING RENEWABLE ENERGY PROJECTS

Dragica Stojanović<sup>1</sup> 

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**Abstract:** *The paper analyses green bonds as sources of financing renewable energy projects. Green bonds are a relatively new form of financing and thanks to increased investors' climate awareness, the market has seen an enormous growth in the last few years. Therefore, the guidelines and standards adopted in financial markets clearly indicate what should be considered a green investment and are a key to further development of the market and achieving the goals of green financing. The goal of the theoretical approach to green bond market in the paper is to identify the key barriers that prevent many countries from taking advantage of this new but growing source of financing renewable energy. The lack of appropriate institutional arrangements for managing green bonds, issuing a minimum volume and high transaction costs are the key obstacles to the development of green bond market. The overall conclusion of the paper is that with just the right measures, many countries could make full use of green bonds to finance climate change adaptation and mitigation projects and thus increase renewable energy capacities.*

**Keywords:** *Green bond, Renewable energy, Renewable energy projects, Climate change.*

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## 1. INTRODUCTION

Ignoring the exposure to environmental threats is a problem that threatens and questions the survival of the rich and the poor, the “privileged” and the “subordinate”. The most alarming of the issue poses the greatest challenge for the future of humanity and imposes the need for a solution at the global and not only at the national level of individual countries (Vujović, S., Vujović, T., 2017). Stopping, or at least mitigating the effects of climate change involves reducing dependence on fossil fuels and developing renewable energy technologies. However, the transition to renewable energy requires an appropriate policy of fostering technological innovations that are of great importance in choosing and (re)constructing lifestyles. Despite the many and deeply rooted habits that contribute to the emission of harmful gases, the practice of people's daily life in interaction with technology can be radically changed (Mišković, 2020). Specifically, the fight against climate change has led to certain trends globally, in terms of shifting investments towards new areas, such as: energy efficiency, technology advancements and renewable energy sources (Mazumdar, Rajeev, 2016).

In recent years, a growing investor demand has led to the development of green bond markets. The term “green bonds” refers to the bonds whose revenue is used to fund projects that do no harm to the environment (renewable energy resources, water and energy efficiency, bioenergy and low-carbon transport). This signifies an obligation for the funds raised to be used exclusively for financing or refinancing “green projects”, funds or business activities (Stojanovic, 2019).

Starting from the fact that climate change requires action at the global level, the paper initially analyzes global investment market in renewable energy. Redirecting global capital to sustain-

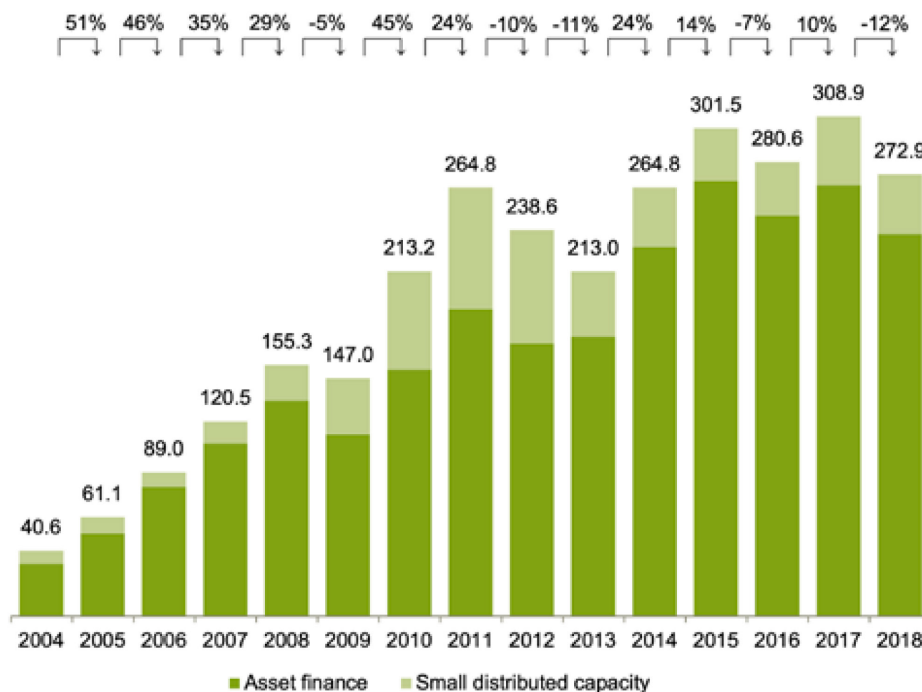
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able solutions requires a greater supply of efficient and desirable instruments in the capital market; therefore, every investment decision must be accompanied by an adequate and optimal choice of financing sources. The fact that green bonds are innovative financial instruments that do not represent an additional risk to investors, the paper continues to analyze the green bond market, which has experienced an enormous growth in the developed countries in recent years. On the other hand, many developing countries are excluded from this growing funding source they need to implement renewable energy projects. Building on the fact, the paper at the end highlights the most significant barriers preventing the developing countries from taking advantage of a new but growing source of financing for renewable energy projects. The paper concludes by proposing potential measures that could lead to the development and growth of green bond market in the developing countries.

## 2. GLOBAL RENEWABLE ENERGY INVESTMENT FLOW

Energy has been and remains a key factor in the development of most countries, regardless of the fact that it was thought that the need for energy would be decreasing with the development of new technologies. In recent years, however, the main requirement that has been put before the energy sector is security of supply which, at the same time, puts environmental protection at the forefront, that is, the use of renewable energy sources. As the awareness of individuals, with the help of media and various other campaigns, grows, so does their need to be more responsible to the environment. Consequently, renewable energy sources have become a compelling proposition for global investment. (Figure 1) (Frankfurt School-UNEP Centre/BNEF, 2019).



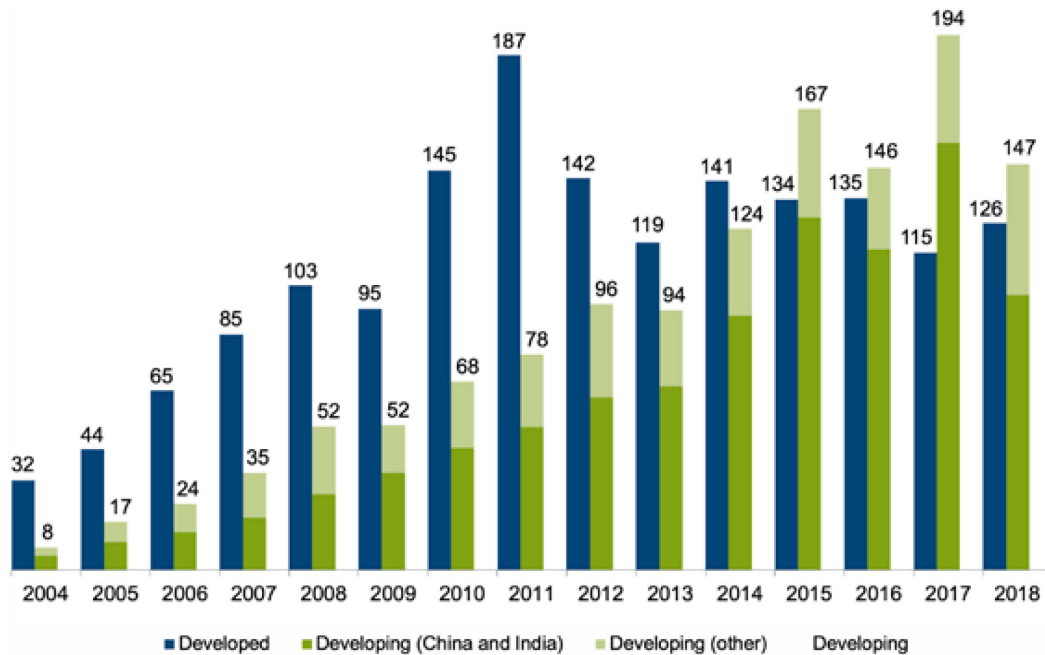
**Note:** Total values include estimates for undisclosed deals

**Figure 1.** Global renewable energy capacity investment, 2004 to 2018, \$BN

**Source:** Frankfurt School-UNEP Centre/BNEF, 2019

As can be seen from Figure 1, total investments in renewable energy sources, without major hydroelectric projects, increased from \$40.6 billion in 2004 to \$272.9 billion in 2018, which is

by 12% less than the record of \$308.9 billion in 2017. As far as capital hydropower investments are concerned, in 2018 they totaled to about \$16 billion. In 2018, the total figure of 272.9 billion consisted of \$236.1 billion for projects such as wind farms, solar parks and biomass plants, by 11% less than in the same period a year earlier. The rest of the funding was directed to solar capacities of less than 1MV (\$36.8 billion), by 14% less than in 2017. Also, when analyzing global investment in renewable energy sources, another investment trend can be observed, and that is a geographical shift towards emerging and developing markets (Figure 2) (Chapter 1, Renewables capacity growth in 2018).



**Note:** Total values include estimates for undisclosed deals. Developed volumes are based on OECD countries excluding Mexico, Chile, and Turkey.

**Figure 2.** Investment in renewable energy capacity, developed vs developing countries, 2004-2018, \$bn

**Source:** Chapter 1, Renewables capacity growth in 2018

As can be seen in Figure 2, up to 2014 most of the investments in renewable energy sources was directed towards the developed countries with the largest investments being \$187 billion in 2011. It can be seen from the same Figure that after this period the developing countries have increased their investments. Specifically, the largest volume of investments was recorded in 2017 when they reached \$194 billion. However, in 2018 there is a decline in investments in the developing countries and a slight increase in the developed countries. More specifically, the developing countries invested \$125.8 billion in renewable sources, which is about 10% more than the previous year. In contrast, the developing countries allocated \$147.1 billion for these investments, 24% less than in 2017. These changes are the result of a consumption decrease in China and India; namely, their total investment fell by 36% to \$99.6 billion, while in “other emerging economies”, the investments rose by 22% to \$47.5 billion.

Despite positive investment trends, many developing countries and emerging economies still have largely untapped potential to invest in renewable energy (Africa, the Middle East, Southeast Asia and Southeast Europe). Having in mind these, greater investment in renewable energy

sources is required so that the developing countries could benefit from energy transformation. In addition to the increasing technological and geographical diversity, investments in renewable energy in the developed countries are witnessing the expansion of new business models and financial products that can encourage investors to finance renewable energy projects. The examples include the growth of the green bond market.

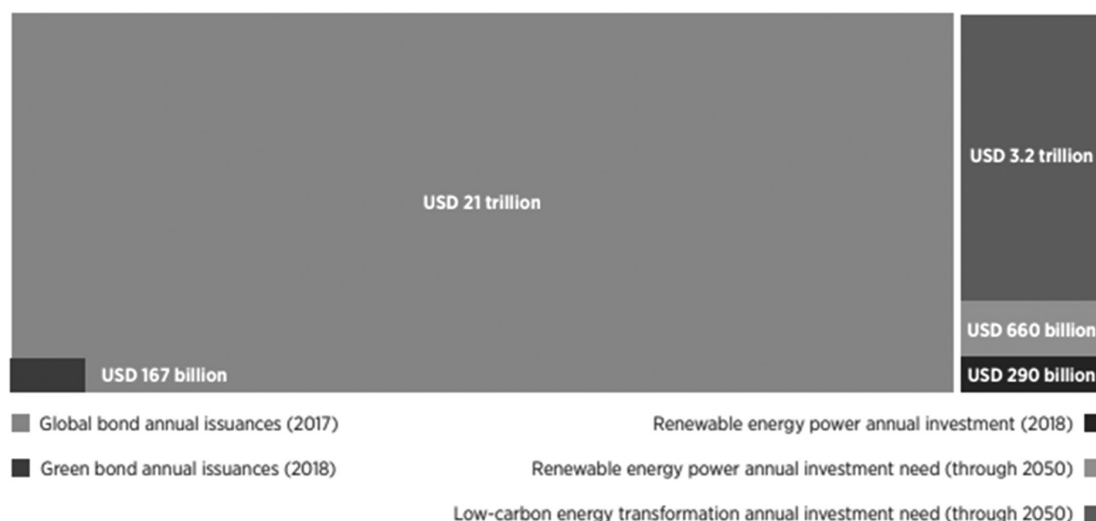
### 3. GREEN BONDS AS A NEW TOOL FOR FINANCING RENEWABLE ENERGY PROJECTS

Green bonds support project finance in the field of mitigation of climate change effects. In addition, their value lies in the fact that the issuer undertakes to direct the funds raised to the financing of the projects that have a positive impact on the environment. This marks the obligation to use the funds collected exclusively for financing or refinancing “green projects”, funds or business activities.

In accordance with the principles of green bonds, the funds raised are directed to (Vella, 2018) [7]:

- Renewable energy,
- Energy efficiency (including efficient buildings),
- Sustainable waste management,
- Sustainable land use,
- Conservation of biodiversity,
- Clean transport,
- Sustainable water management (including clean and/or drinking water), and
- Adapting to climate change.

In contrast to the conventional bonds, green bonds are used to finance specific “green” investments and are not an additional risk to investors. Compared to bank deposits, bonds tend to provide higher profitability, liquidity and stability that meet the most diverse investors (Ilić et al. 2019) [8]. The funds raised must be spent on renewable energy and sustainable green projects (Figure 3).



**Figure 3.** Green bond issuances, renewable energy power investment, renewable energy power investment need, low-carbon energy transformation investment need and global bond issuances (USD, annual)

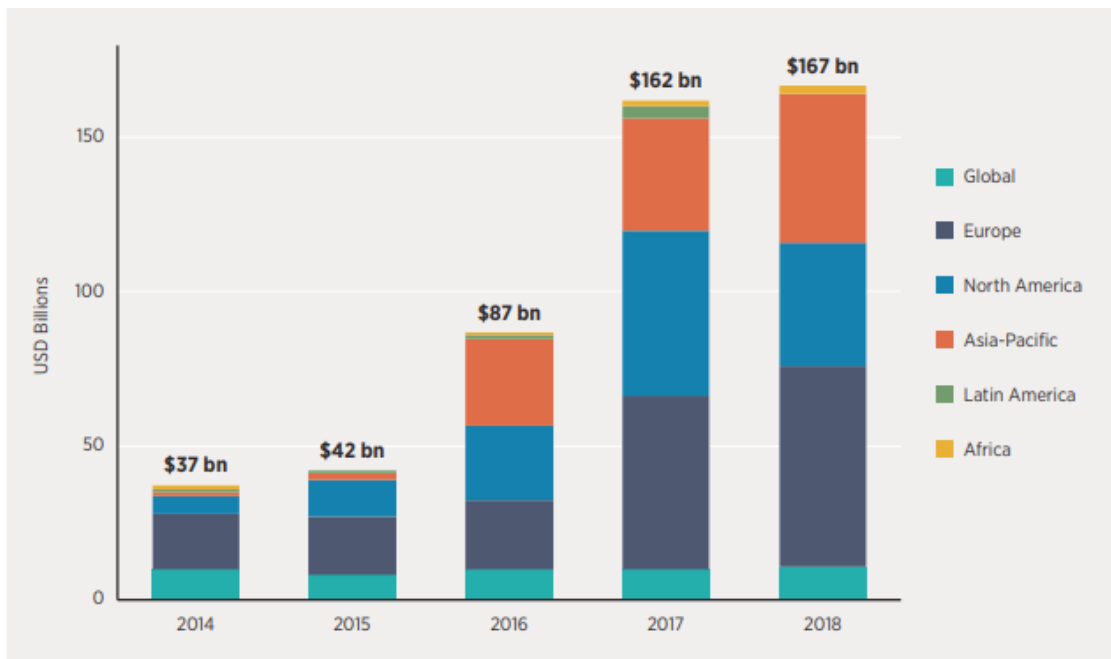
Sources: IRENA, 2019a



Green bonds can be viewed as an experiment, which has shown that capital markets can be a source of financing initiatives to solve climate change. The key objective is to offer investors, along with the bonds, a product that meets their investment return targets which include the risk, as well as to support the finance of the projects that reduce greenhouse gas emissions on one side, while on the other, to help countries adapt to the impacts of the climate change (Knežević et al., 2013) [10]. On an annual basis, green bonds raised USD 167 billion in 2018, while the total bond market raised around USD 21 trillion (SIFMA, 2019) [11].

#### 4. GREEN BOND MARKET

In addition to the fact that green bonds are a relatively new financial instrument in climate protection, their market has experienced a remarkable growth since 2007. As shown in Figure 4, the first multilateral development institution to issue a \$1 billion bond in 2007 was European Investment Bank (EIB). A year later, the World Bank issued a second green bond to finance climate projects, mitigation of and adaptation to climate change. However, during the 2008 financial crisis, investors found environmental projects risky and unprofitable, thereby reducing interest in green bonds. After this period, increasing investor awareness of the benefits of green investments and the impact of the climate change on the financial stability of the developed countries has led to an exponential growth of green bond issuance (Chiesa, 2017).



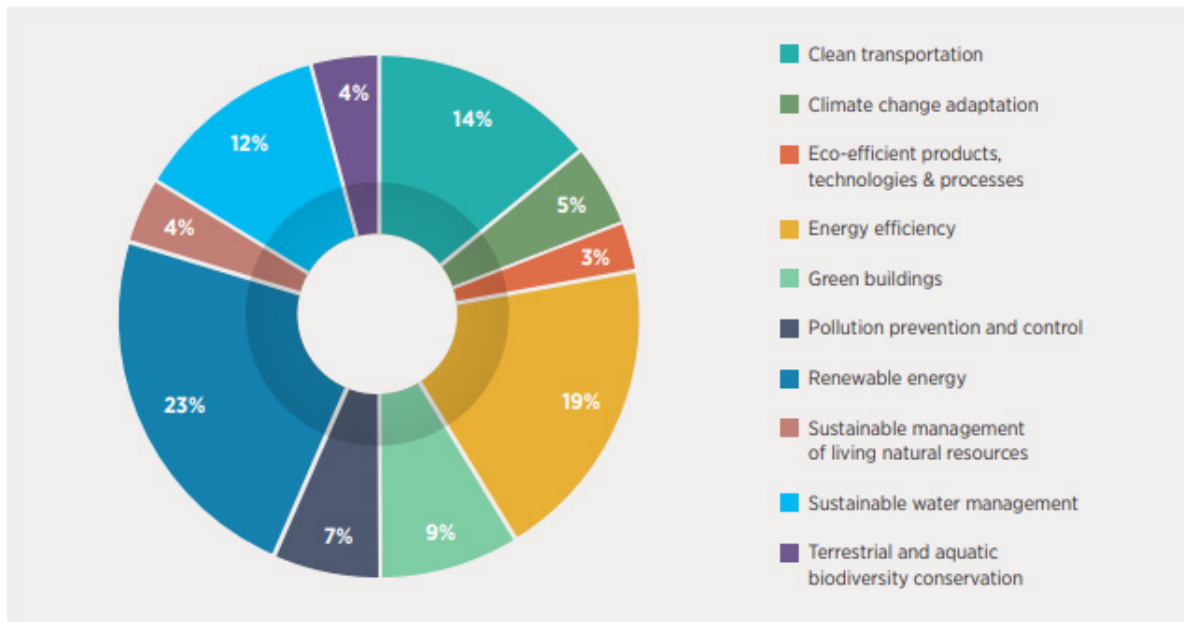
**Figure 4.** Annual green bond issuances, per region, 2014-2018, USD billion

Source: CBI 2019a

The key factors for the market development were the introduction of the International Capital Market Association (ICMA) in January 2014 and the principles of green bonds, which are the basis for many existing green labels. Since that time, the market has been on the rise so that \$42 billion was issued in 2015, four times more than in 2013. The same trend continued in 2016 when aggregate green bond emission was \$87 billion. Specifically, the European Bank for Reconstruction and Development (EBRD) raised €1.64 billion in 2016 through 57 bond issues in eight different currencies. Finally, the 2015 Paris Agreement paved the way for a new trend in green finance. Moreover, in its latest report in 2017, the Climate Bonds Initiative noted that

the worldwide supply of green bonds exceeded \$155 billion in 2017 (Ceres, 2014) [14]. Overall, annual global green bond issuances rose from USD 37 billion in 2014 and USD 167 billion in 2018 (Figure 4).

Along with other innovative capital market instruments, green bonds can support new or existing green projects by accessing and channeling long-term capital into more “green” categories (Figure 5) (IRENA, 2020).



IRENA analysis based on data from the Environmental Finance Bond Database (subscription required) \*2019 includes data up to and including November 2019.

**Figure 5.** Breakdown of green bond issuances by use of proceeds, by cumulative volume (USD), 2010-2019\*

**Source:** IRENA, 2020

According to an IRENA study, of a sample of over 4,300 green bonds, as of the categories of revenue use, 50% of bonds (by volume, in USD) had renewable energy, while 16% was for renewables only. On a regional basis, in Europe were dedicated (by volume, in USD) 21% of green bonds, 19% in Africa, 16% in the Americas and 14% in Asia Pacific (IRENA, 2020). These figures indicate that green bond market faces many challenges that threaten its development, especially in the developing countries.

## 5. BARRIERS TO THE DEVELOPMENT OF THE GREEN BOND MARKET IN THE DEVELOPING COUNTRIES

When talking about the development of green bond market in developing countries, we must bear in mind that there are certain barriers that can vary from country to country. These range from institutional to market barriers and are considered to be the most challenging for the development of green bond market and the development of green economy concept.

*Institutional barriers* – Green bonds primarily require technical skills to monitor and evaluate the use of funds throughout a project life cycle, which many developing countries lack. A recent

survey by the G20 (Green Finance Study Group) found that the respondents (74%) recorded a lack of knowledge of the existing international practices regarding green bond transactions as an important barrier to the market development. This applies to many developing countries, where the knowledge gap is exacerbated by the fact that the benefits of green bonds have not yet attracted the attention of policymakers, issuers and investors. The lack of commonly agreed standards for green bonds and their novelty may justify the knowledge gap. Furthermore, in some developing countries do not enable green bonds emission inappropriate institutional arrangements. Often, different sectors of ministries with different mandates and skills achieve different, if not conflicting, goals in implementing government policy. These differences between priorities and mandates may lead to a diminished political influence by the ministries of the environment, meaning that effective coordination between the Ministry of Finance and the Ministry of the Environment is necessary for the green bond market development (Obradovich, Zimmerman, 2016).

*Market barriers* – The development of green bond market in the developing countries is slowed down by the following market barriers:

1. minimum size issuance,
2. emission currencies, and
3. high transaction issuance costs.

The issue of minimum size refers to the minimum value that a green bond must carry in order to be attractive to the issuer. According to the world's leading agency Moody's, green bonds must have a minimum value of \$250 million. However, many green projects in developing countries do not meet the minimum size required by investors. Namely, in many countries, low population density combined with high poverty rates make small projects more attractive especially in rural areas. The size of most of these small projects barely exceeds \$10 billion on average, suggesting that the minimum size required by investors could be a barrier to breaking into the developing countries markets (UNCTAD, 2017).

Further, transaction costs refer to the costs incurred by the issuer to obtain a green label certificate from an independent auditor and to produce regular documents showing the allocation of green bond revenue over the project life cycle. More specifically, transaction costs are very significant when examining an issuer's creditworthiness along with the technical assessment of the potential environment impact of his project and can range from \$10 to \$100,000. These costs are a barrier for small green bond issuers.

Finally, the insignificant barrier to expanding green bond market in the developing countries is probably the currency of the bond issue. A review of the Climate Bond Initiative database shows that between 2005 and 2017, investors used mainly Renminbi (32%), USD (26%) and EUR (20%). Accordingly, if developing countries (most have non-convertible currencies) wish to raise large amounts of capital in international financial markets, they must issue their green bonds in international currencies (Kaminker, 2016).

## 6. CONCLUSION

Globally, the orientation towards renewable energy sources is a way to ensure a higher level of energy, economic, environmental, technological and political security of each country. Renewable energy sources are a sustainable and greener substitute for carbon-based energy and

support global determination in pursuing the Sustainable Development Goals. This worldwide concern is setting itself up as a generator of green bond market development. Green bonds are channeling finances toward low-carbon investments. While companies and local governments in the developed and emerging countries are increasingly issuing green bonds, a number of institutional and market barriers are preventing the developing countries from grasping all of their benefits. The lack of knowledge about how it works, inadequate institutional arrangements, minimum size issues, currencies and high transaction costs are the key obstacles hindering the development of green bond markets in the developing countries. However, with the right measures, these countries could make full use of green bonds to finance renewable energy projects. The potential measures include: efficient coordination between the ministries of finance and environment, efficient use of multilateral and national development banks to manage green bonds, providing guarantees of local governments for issuing and promoting local markets where domestic investors could issue green bonds in local currency. Accordingly, increasing government assistance, together with favorable policies and regulations, can play a key role in the development of green bond market and the growth of renewable energy market in the developing countries.

Although the paper has reached its goal of examining the growth of renewable energy and green bond markets, as well as identifying key obstacles preventing the developing countries from taking advantage of this method of financing renewable energy, its limitations should not be neglected. First, by looking at the developing countries as a homogenous whole, the paper neglects the differences in terms of economic characteristics. Second, the relative lack of academic literature on green bonds in the region has been a challenge for the author in conceptualizing the theoretical framework of the paper. Nonetheless, in the author's view, the paper is the basis for some further research in this area and perhaps an attempt to draw the attention of policy makers and investors to the importance of developing a green bond market for financing renewable energy sources in Serbia.

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# SENIOR HOUSING IN THE SLOVAK REPUBLIC

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**Abstract:** *Housing of seniors is very non-unified in the Slovak Republic. As a central government, the state has delegated much of the competence in the area of senior housing to local governments in the form of delegated competences. This is also the case for the third sector, which is involved and uses state support for its activities. There is no advanced form of retirement facilities network. However, it is not only important that seniors only passively use the assistance of the state in case of dependence on care, but the social policy of Slovakia should aim to active form of social secure, lead elderly to their own responsibility and help them to financially cover acceptable housing. This is endangered by low pensions, income and expenditure structure of retirement households. New challenges in the future include the creation of social enterprises and senior parks. The purpose of this article is to map the above aspects and point out possible innovations and examples of good practice.*

**Keywords:** *Financial Situation, Social Services, Central Government, Municipalities, Third Sector.*

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## 1. INTRODUCTION

Seniors' housing is a challenge for today and the future. The aging population in Slovakia is projected to be significant and the country will be one of the oldest in Europe. All these factors will require solutions in this area at all levels, comprehensively involving public administration at national, regional and local levels because Slovakia has a significantly decentralized system of country governance. Also, important is the engagement of the third sector and its cooperation with the state. However, appropriate legislation is needed for this.

## 2. FINANCIAL SITUATION OF SENIORS AND HOUSEHOLDS STRUCTURE

The housing structure of the population of the Slovak Republic shows a high proportion of own dwellings. The most extensive survey of ownership of houses and flats is during the census in the Slovak Republic. There are other surveys that are sometimes based on estimates. The last census of 2011 shows the following structure. In its databases, the Statistical Office does not distinguish the structure of ownership relationships in dwellings related to age groups, therefore aggregate data are presented without taking into account the seniority of the population. The total number of granted citizens of flats is 1 669 903. If we redistribute them according to the relationship of ownership and inhabitant of the flat, then 86,1% of the flats are inhabited by the owner, 2,34% of the flats are inhabited by tenants, 4,12% of the population lives in the other form and 3,78% of people did not state the legal form of ownership. Of the total number of dwellings, 45,78% are dwellings in family houses or villas. (Census of population, houses and flats, 2011) Those who are only co-owners are included into group of dwelling-owners and it is sufficient that one member of the household is the owner or co-owner. Rental housing must be for repayment and under a lease agreement. Cooperative housing is managed by building housing cooperatives, not by other cooperatives. Other forms include e.g. flats for free use. (Fakty o zmenách v živote obyvateľov SR, 2014, p. 14 – 16)

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The structure of households in Slovakia is recognizable from the simulated data processed most recently in the Survey on Income and Living Conditions of Households in the Slovak Republic.

**Table 1.** Structure of households in the Slovak Republic with special regard to seniors

Selected data	TYPE OF HOUSEHOLD				
	One-person household	Without dependent children			Other households
Two-member household - both under 65 years of age		Two-person household - at least one of them aged 65 and over			
Number of households	366 623	250 320	228 370	296 585	710 163
Number of persons	366 623	500 640	456 740	1 037 389	2 990 619
Therefrom number of pensioners	227 552	75 038	373 875	216 941	176 998

**Source:** EU SILC 2018 Survey on Income and Living Conditions of Households in the Slovak Republic

It should be noted in the following table that the retirement age in Slovakia is currently around 62 years or less depending on gender and the number of raised children. (Dôchodkový vek od roku 2020, 2019) There is also the early retirement possibility. The structure shows that the proportion of pensioners in the group of two-member households and at least with one person over 65 is 81,86%. One-person senior households get second place in the ranking with a share of 62,07%. Two-person households with members under 65 years also report retirees, also because of the before mentioned fact of retirement earlier than 65 years. 5,92% of pensioners live in households with dependent children. (EU SILC 2018, 2019)

In order to know the housing situation, it is necessary to take into account the income and expenditure of pensioners. According to the results of the last survey of 2018, it is clear that pensioners' households have a total gross income of 456,76 EUR per month per person. To compare the households of the employed, where higher number of the dependent persons like children, the income is 599,38 EUR per month per person. The national average is 549,11 EUR per month per person. In pensioners' incomes the largest share is in old-age pensions of 366,76 EUR per month and per person. (DATAcube, 2019) It should be noted here that, according to the pension system, not every citizen is entitled to a retirement pension when he / she reaches retirement age. This may be the case, for example, if the number of years of senior insurance is insufficient. Even though these citizens are statistically classified as pensioners, they do not receive an old-age pension and distort the monitored data on the income structure. The real average old-age pension according to the data of the Social Insurance Agency as of January 2020 is 477,14 EUR after the increase compared to the previous period. (Priemerná výška vyplácaných dôchodkov, 2020) Of the other pensioners' incomes, other social income of 446,26 EUR per month and person is significant. It can be inferred that pensioners are highly dependent on the social system. Its income is not taxed, with the result that the difference between gross and net total income is 6,69 EUR, while the average difference value of households of employees is 108,99 EUR.

The other side of the budgets is expenditure. The following table provides an overview of averaged expenditure per month and per person according to the survey of the Statistical

Office which concerns households of seniors and the average household in Slovakia.



**Table 2.** Structure of household expenditure on housing in EUR per month and per person in 2018

		All households	Pensioners households
<b>TOTAL</b>			
<b>Housing, water, electricity, gas and fuels</b>		<b>65,99</b>	<b>82,28</b>
therefrom	Rent for housing	4,97	1,75
	Regular dwelling maintenance	5,11	4,46
	Other housing services	16,33	22,18
	Electricity	14,13	17,83
	Gas	11,36	16,37
	Fuels	3,92	5,11
	Hot water and central heating	10,18	14,58

Source: ŠÚSR DATAcube

Seniors achieve a high share of housing-related expenditure of 23,07% of total expenditure, it represents 16,29 EUR per month and a person higher volume of finance than the average statistically observed household. Rents are low in both groups (average and retirement households), which is affected by the above-mentioned share of housing in their own dwellings, and for seniors it is lower due to past socialist policy, when the population was led to buy or build their own dwellings. The higher energy payments are also influenced by the nature of the house, where energy efficiency and economy were not emphasized in the case of previously built buildings.

Out of other items of personal expenditure of seniors, the highest share is represented by expenditure on food and non-alcoholic beverages with a share of 25,6% in total expenditure, followed by transport and other expenditure in the range of 6 – 7%. Other budget items are below 5%.

### 3. STATE AID AND LEGISLATION

The Slovak Republic has created a legislative framework for direct support and solutions of seniors' housing. The main law is the Social Services Act, (Law n. 448 / 2008) which specifies social services, which include housing assistance. A person which reaches retirement age is considered a person in an unfavorable situation and is entitled to allowances or specific social services. Especially long-term housing services will be discussed for the purpose of this article. It is necessary to differentiate to what extent the person being assessed is independent and to what extent he / she is dependent on a specific service, which aims to create prevention or to directly deal with a crisis situation.

### 4. SOCIAL FACILITIES FOR PERSONS WHO HAVE REACHED RETIRED AGE

In Slovakia, it is differentiated whether an individual has not reached retirement age and supportive housing can be provided, but if he / she has already reached this age, the facility for seniors is primarily intended for him / her. Firstly, the degree of dependence on social services must be at least 4 out of 6. The scale of calculation of the degree of dependence on social services is calculated as the sum of points from different social areas of life, e.g. movement on the plane, movement on the stairs, orientation in the environment, personal hygiene, dressing, eating and drinking regime. For the fourth degree of reliance, the average extent of dependence is more than 6 hours per day. There are also exceptions where residence in this type of facility may be

provided for other unspecified reasons. (Law n. 448 / 2008) This supplement can have both a positive and a negative impact. On the one hand, cases that rationally should be included into provision of this service, even they do not have a level 4 or more, will be covered, on the other hand there is scope for system abuse and unauthorized allocation of space in the facility. These exceptions from practice include maltreatment, abuse of various kinds, loss of home, health or life threats. (Ponuka sociálnych služieb, 2020) The facilities for seniors, among the citizens of Slovakia formerly known as retirement homes or peace rest homes provide social counselling, rehabilitation, accommodation, meal, room equipment, cleaning, washing, personal assistance, nursing care, leisure activities. These facilities can provide services for up to 40 citizens per building. For comparison, the supporting housing facility allows to provide services for a maximum of 24 clients in a separate building under the condition of 2 housing units, otherwise only for 12 clients. (Law n. 448 / 2008) In this way, the overall targeting of the state's social policy is ensured in order to give preference to housing of a family nature over mass housing in large-scale facilities in state social facilities.

Specialized facility is another type of social service focused on long-term housing. It is specific in that it specializes in a specific area and group of clients. The client has a minimum degree of dependence of 5 and suffers from a specific disability, e.g. Alzheimer's disease, Parkinson's disease, dementia of various types of etiology, AIDS, multiple sclerosis, schizophrenia, pervasive developmental disorder. The services provided at the facility are similar to those at the senior facility. In a specialized facility, not only seniors, but also clients of all ages can be located. They are multi-generation facilities. For this reason, some also provide education and training, especially for children in youth and the development of work skills.

Nursing service facilities are similar in nature to the above-mentioned types of social services in the housing sector, but are primarily intended for individuals who rely on nursing services, but this service cannot be provided to them properly in their own home or apartment.

In addition to these facilities, there are others that serve for provision of nursing services and have short and temporary nature of accommodation, or serve only on an outpatient basis and clients visit the facilities on a daily basis. (Law n. 448 / 2008)

## **5. SPECIAL PURPOSE HOUSING AND SOCIAL HOUSING**

Another option and tool, especially for local governments, is to purchase houses with special purpose flats. Under the legislation of the Slovak Republic, these flats can be used for the provision of care services. (Law n. 189 / 1992) A distinction must be made from special purpose dwellings given as dwellings for certain job positions, diplomatic dwellings and others which are not in social nature. These houses are designed for those whose health condition allows independent living. Cities have the right to determine their own conditions for such housing. For example, the city of Nitra, one of the eight regional cities, requires the applicant to have a permanent residence in the city for at least two years. This housing is intended for old-age pensioners, early retirement pensioners and people with severe disabilities and are over the age of 50. It should be added that this is not a social services facility pursuant to Act no. 448 / 2008, as mentioned above. (Prideľovanie bytu osobitného určenia alebo bytu v dome osobitného určenia, 2020)

It may be a problem that not all municipalities have treated the issue of social housing in one document. 66% of municipalities deal with this area in the economic and social development

plan, 29% in the housing development program, 18% are in the process of solving the problem, in 13% of municipalities there is no official document addressing social housing and 8% have this area included in the program declaration. (Suchalová, Staroňová, 2010)

The use of the above-mentioned housing units would at least partially make easier the situation. For example, in the capital city of Bratislava, 1135 clients are placed in the municipal facilities for seniors and 2025 citizens are included in the waiting list. (Zariadenia pre seniorov, 2019)

For rented flats, the situation from Bratislava can be used. The conditions can be partially adjusted by the municipalities at their own discretion and for this reason it is not possible to fully generalize and specify the situation in each municipality. The rented flats of the city of Bratislava belonging directly to the city are not only available to pensioners, but many seniors qualify the conditions for housing set by the municipality. You must have been resident for at least 5 years before applying, you must have an income of at least 1,2 times the living wage level and you cannot own or rent another housing unit. (Nájomné byty mesta, 2020) A special group of rental apartments is the House for the Elderly, where the tenant must be at least 50 years old. As of 2019, there are 872 rental apartments in Bratislava and others are prepared. (Hlavné mesto odovzdá Bratislavčanom nové nájomné byty, 2018) There are approximately 50 persons in the waiting lists for renting a municipal apartment. This is only approximate because the city does not update the lists on the same date. (Poradovníky žiadateľov o nájom obecného bytu, 2020) A special group of seniors are the restitutes who had to leave the flats because they acquired them under socialism from the state, but these flats were often acquired in a non-market way from the original owners who registered in the democratic republic and recovered them. In this case, the city must, according to law no. 260 / 2011 provide substitute housing for example in their rental apartments. If the city does not have this option, it must refund the restitutioner for the difference between market and regulated rent. (Law n. 260 / 2011)

## 6. PROVIDERS OF SOCIAL SERVICES AND FINANCING

Social service providers are divided into public and non-public. The main public service provider is a municipality, a legal entity established or founded by a municipality and, in certain specific cases, by a higher territorial unit. Other providers are non-public and may be foreigners, whether they are from or outside the European Union. If it concerns e.g. more difficult to implement or costly project, it is possible to create a partnership of entities. This partnership can be combined with private entities in cooperation with the municipality, it means a combination of public and non-public service provision.

The position of municipalities is partly regulated by law, where minimum standards and obligations are set, and partly they are left with decentralized independence. Municipalities have a duty to set up the availability of social services, in our case a place in a facility for seniors, a specialized facility or a care nursing facility. The client has a choice between facilities and providers. In reality, this choice can be very limited if the municipality has only one device of its kind. The specific facility does not necessarily have to be set up by the municipality, but it may also be a non-public provider whose service is negotiated by the municipality and the facility does not have to be located in the territorial district of the municipality. In case of danger of the life and health of the person, the municipality must immediately provide the appropriate social service. Importantly, the primary responsibility for the situation remain on the person himself, and assistance should be given firstly by a close person, in this case by relatives. (Law n. 448 / 2008)

Municipalities have the right to associate and form common municipal offices. Slovakia is fragmented at the lowest government level into thousands of municipalities and the situation is partly reminiscent of France. Some municipalities do not reach even 100 inhabitants and thus have lower incomes, because the incomes of municipalities depend mainly on the number of inhabitants and at the same time the financing does not fully reflect fixed costs. These facts jeopardize the financing of social services and, for a small number of municipal officials, there is a lack of practitioners. In Slovakia, therefore, common authorities co-exist alongside the original municipal authorities and are specialized according to areas of competence, such as construction or social work.

In practice, the aforementioned common social services municipal offices deal with the above-mentioned social services and social housing. The inhabitants can turn in the need of social counselling, administration, and the solution of socially unfavorable life situations. Joint municipal offices communicate with the Social Insurance Agency, the Office of Labor, Social Affairs and Family, health insurance companies, health care providers and support the integration of citizens and others. (Spoločný obecný úrad pre zabezpečenie sociálnych služieb, 2016)

**Table 3.** Number of providers of selected social accommodation services in the Slovak Republic

	Form		Provider	
	annual	short-term, ambulant or other form	public	non-public
<b>Facilities for seniors</b>	494	12	223	283
<b>Specialized facilities</b>	249	45	161	133
<b>Nursing service facilities</b>	141	6	78	69

**Source:** Ministry of Labor, Social Affairs and Family: Central Register of Social Service Providers

Table above shows the structure of providers of selected social services aimed at providing accommodation for pensioners. It does not include the number of beds, as the Ministry of Labor of Social Affairs and Family of the Slovak Republic refused to provide this data in the required form for technical reasons. Only providers not deleted from the register of social service providers are included in the table. These facilities are located throughout the Republic. Their even allocation is important because the municipality must have a contracted provider for its residents if it does not have or does not establish the facility itself. If municipality makes a contract, it must also contribute financially. The purpose of this reimbursement is to ensure that the service provider has covered at least the minimum current expenses and, at the same time, if the client / recipient of the service has not sufficient revenue to pay for the service, he is not forced to remain without the necessary care. (Podmienky a spôsob výpočtu finančného príspevku v rozpočtovom roku 2018, 2018) The number of non-public providers is 485 and exceeds the number of public providers, in which there are 462 in the types of examined facilities. There are 6994 providers of all kinds of social services throughout Slovakia regardless of whether they are public or non-public. (Centrálny register poskytovateľov sociálnych služieb, 2020) It is important to ensure that these facilities are naturally distributed throughout the Republic, therefore problems with accessibility and lack of seats in certain regions are eliminated, which is difficult to predict with certainty in advance.

Funding is based on several components - contribution from the municipality, payment from the recipient of social services, contribution from the state budget for the provision of social servic-

es, gifts and others. Contributions from the state budget no longer distinguish whether they are public or non-public providers. (Law n. 448 / 2008) According to the Order of the Government of the Slovak Republic, the per capita allowance is set at the following amount.

**Table 4.** The amount of the financial contribution from the state budget for the provision of social services in 2020

The dependence degree of a natural person on another natural person assistance	Amount of financial contribution for the provision of a residential form of social service in a social service facility per month per place
4 <sup>th</sup> degree	312 EUR
5 <sup>th</sup> degree	442 EUR
6 <sup>th</sup> degree	546 EUR

**Note:** Only contributions from the 4th and higher degrees of dependence are listed, because at lower degrees these services are not normally provided.

**Source:** Government Decree n. 175 / 2019 determining the amount of the financial contribution for the provision of social services in social service facilities for natural persons who are dependent on the assistance of another natural person and for natural persons who have reached the age necessary for retirement pension for the year 2020

## 7. NATIONAL PROGRAM OF ACTIVE AGING

The Ministry of Labor, Social Affairs and Family of the Slovak Republic has prepared the National Program of Active Aging for 2014 – 2020, focusing on individual aspects of the pensioner's life. Dignified housing is a basic necessity of life and an important determinant of quality of life. Under the Housing Development Program, municipalities have the possibility to apply for a subsidy for the purchase of rental apartments with floor area up to 80 m<sup>2</sup> for standard flats and up to 60 m<sup>2</sup> for lower standard flats, but these areas limits do not apply to barrier-free flats. (Národný program aktívneho starnutia na roky 2014 – 2020, p. 39 – 41) These dwellings are part of the municipalities housing fund as rental dwellings which have been mentioned above. An authorized natural person which can apply for these flats is a person with monthly household income up to a maximum of three times the subsistence living level, or four times the subsistence living level if a person with a seriously disabled or dependent child lives in the household. (Law n. 443 / 2010)

Three measures, actions have been developed under the National Program of Active Aging:

1. Prepare support for the construction of rental apartments under the Housing Development Program and the State Housing Development Fund in accordance with the state budget;
2. To motivate towns and villages in the construction of rental apartments for socially endangered groups by providing support tools such as subsidies, soft loans and other incentive measures;
3. Promote measures to increase energy efficiency in housing, as this reduces the costs of users and therefore increases the availability of housing. (Národný program aktívneho starnutia na roky 2014 – 2020, p. 39 – 41)

## **8. EXAMPLES OF GOOD PRACTICE FROM ABROAD AS POSSIBLE INNOVATIONS FOR THE HOUSING SYSTEM IN SLOVAKIA**

The following project was implemented in Italy in the town of Aldeno, in the province of Trento, and is based on the rebuilding of old apartments and the construction of 23 new housing units and the preparation of a new housing model based on mixing different age groups from young couples to seniors within the complex. In deciding who gets housing, income testing, competence and willingness to live in a multi-generation environment, professional skills, previous volunteering and civil engagement were used as the criteria. Practical and safe care was taken in the construction of the dwellings. The complex also includes non-residential premises designed for social events and maintaining cohesion among residents, shared kitchen, gym. The result is also the regeneration of the whole urban environment, strengthening the principles of mutual assistance and solidarity. (Preparing the future, 2012, p. 11)

The network of senior parks in the Czech Republic was built by the private sector. Initially, the founder of the project needed to provide barrier-free housing for his parents and gradually created a whole system of retirement homes. Currently, there are six functional senior parks and three are under construction. The dwellings are concentrated together in one area where pets can be kept. Clients have separate barrier-free apartments with kitchens. There are provided leisure activities and there is no schedule of the day for residents. Housing units surround the atrium and parking spaces are also available. An important fact is that the project is not a nursing service. Although it is possible to order assistance services, but this system is based on the autonomy of the center residents. They pay rent monthly. (Bydlení pro seniory, 2020)

In the Netherlands, in Houten, another project for the combined housing of seniors and young mothers was prepared and implemented. The complex consists of 17 apartments, of which 13 are reserved for young mothers and teenage girls who need temporary independence and support. Another 4 housing units are designed for seniors who help as good neighbors and support young women and mothers according to their possibilities, e.g. they can give good life advice, assistance. The project also includes a training center for young mothers. Pensioners partially fulfil the role of supervisors, and by activating them, senior lives take on a new dimension of solidarity and it is benefit for society, while at the same retired residents receive appropriate housing. Certainly, this type of housing for seniors requires independence and a sufficiently good level of health. (Preparing the future, 2012, p. 19 – 20)

## **9. CONCLUSION**

In Slovakia, several possibilities of securing housing for seniors have been created. Most often it is own housing. The state enters into the provision of assistance when an individual is not able to secure dignified housing on its own, but before that, the state seeks to provide assistance by nursing services in the place of residence of the senior. This applies if the reason is unfavorable health. The Slovak Republic has established a network of facilities where clients are placed on the basis of an assessment of their condition and needs which they are unable to provide themselves. These services are also provided to a significant extent by the third sector, which is, however, bound by legislation and, therefore, not motivated to innovative solutions. It would be very suitable to take interesting approaches from abroad, where, unlike Slovakia, in some cases, the senior receives social service, but it is not so much institutionalized and mass, and in given types of housing the seniors receive only those services which they need. However, this

would require a change in funding, where the facility currently receives a universal package depending on dependence, which only partially differentiates clients based on their real needs. Cooperation between local governments and the third sector offers the possibility of streamlining the allocation of social services, which is similar to good experience, when the state was decentralized and thus was transferred part of the social competences in the area of senior housing to local governments.

On the issue of funding, the future will show how following generations and the welfare system of the state can cope with demography while ensuring sufficient resources for dignified old age. Currently, housing-related expenditures reach larger share for seniors than other types of households. Here, it must be ensured that this high share does not increase in the future, in particular to the detriment of other budget lines which are necessary to life. On the other hand, the cost of housing is covered by income that is tax exempt in Slovakia.

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# SUSTAINABILITY OF THE SUPPLY CHAIN OF SERVICES IN AVIATION

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**Abstract:** *The actuality of the topic was the fact that nowadays, the aviation has become an important part in connecting people. It is enabling it to reach almost anywhere all over the world. With the entry of low-cost airlines, aviation has become available to a larger segment, which has stimulated the industry.*

*During the elaboration of the subject, it became a fact that inquiry of the entire supply chain of an airline also requires information that companies are reluctant to share with the outside world. So, the paper is examining the value chain according to the information available. It is involved to well-known European airline to the investigation - a low cost airline.*

*Over the past few decades, the negative changes in the global climate have been increasingly occupied by people; that's why it is prompting companies around the world to take the issue more seriously and impact of their company's ecological footprint. The research provides a comprehensive analysis of the value chain of the aviation, focusing on sustainability, illustrating the complexity of the airline supply chain.*

*While current forecasts make positive predictions for civil aviation, changes in environmental impacts could radically change this sensitive industry at any time.*

**Keywords:** *value chain, supply chain, sustainability, logistics.*

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## 1. INTRODUCTION

### 1.1. The supply chain and the value chain

The supply chain includes all the organizations which the main company interacts directly or indirectly, from the place of origin to the consumer. The members in the supply chain are cooperating with each other in the process of purchasing, producing and delivering goods to the consumer, taking into account consumer behaviour. (Karmazin - Tóth, 2016) Supply chain management members form a network structure and are connected to each other. A simple supply chain company consists of suppliers, intermediaries and consumers. But, nowadays, we can talk about an expanded supply chain rather than a simple one. (Hugos, 2003) The extended supply chain takes into account all the members of the system. As a chain becomes very long and complex, therefore it is worth distinguishing between primary and support members. By defining these terms, we can formulate the starting point and the consumption point of the chain (Kozma - Pónusz, 2016).

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It is important to consider which member the central company is during the analysis of supply chain, since it is from this perspective that processes should be interpreted. Each company sees itself as a leader and sees the other members of the chain differently, but it is important to understand the role of each member in the chain. (Kozma - Pónusz, 2016)

The value chain expresses all the activities that take place within the company, and shows the extent of each activity contributes to the company's core objectives. The value chain consists of a series of activities that generate greater value from resources through various transformations and are accepted as value by the consumer itself. Therefore, the emphasis is on the consumer's willingness to recognize the work and other resources invested. The company must also keep in mind that it meets consumer needs in a way that covers production costs and provides them with profits. (Chikan, 1997)

The supply chain is closely linked to the value chain. While the supply chain combines activities that extend beyond the boundaries of the company to meet consumer demand, the value chain represents a series of processes within an enterprise to produce value that satisfies the consumer. It should be noted that one company can create value within the supply chain for the operation of another company, so there are several value creations processes within a supply chain.

Porter said that the best way to meet consumer demands, while returning on the cost of investing in assets, is to produce value through the interconnected activities of several companies. (Balázs, 2014) Thus, the success of a company depends not only on its own company-specific value chain but also on the entire value system (Szegedi, 2015) Chikán (1997) said that a company satisfies consumer demands effectively if it contributes to its success. It is important that members of the value chain should not treat each other as competitors, as they can produce only together the ultimate consumer value. The value chain highlights the importance of partner collaboration as it can bring economic benefits such as lower logistics costs, lower inventory costs, lower purchasing and operating costs, or higher work efficiency, or faster return on investment. Successful cooperation requires mutual trust and integration in the long run, to the benefit of both parties. (Balázs, 2014)

The developing a competitive business strategy, the company needs to be aware of who they want to target their product to and target potential consumers. Priorities such as willingness to spend, delivery time, variety and quality should be identified. A competitive strategy is usually aimed at one or more customer segments in order to provide a product and service that meets the needs of consumers (Chopra - Meindl, 2016).

In economic literature, product and service are often mentioned together. However, as the economic environment and customs change, it is worthwhile separating these two concepts. According to Kotler and Keller (2012), service is defined as any action or efficiency that one party may offer to the other party that is not materialized and does not result in ownership of anything. Its production may be not related to a physical product. Manufacturers, distributors and dealers are increasingly striving to differentiate by providing value-added service or simply excellent customer service.

The structure of the supply chain of services is also different due to the characteristics of the services. The customer side of the service supply chain is shorter than the same section of the product-related supply chain because demand and consumption occur at the same time. This

reduces the complexity of the chain and modifies the roles in the chain due to the nature of the service. Due to the production of the service, the first level supplier of the central enterprise is the consumer himself who is involved in the production of the service. This phenomenon is called consumer - supplier duality. This means that the service flows not only from the suppliers to the consumers but also from the consumers to the suppliers, thus the consumer is also the input supplier of the service delivery process. As a result, the supply chain becomes bidirectional.

## **2. THE AVIATION SECTOR TODAY**

The aviation industry is a global network of commercial aircraft operators, air navigation service providers and aircraft manufacturers. Each year it plays an increasingly important role in the world economy; growth has a positive impact on employment, trade and tourism. (ATAG, 2018 / b) Aviation is not only competitive but also vital to today's society as it connects markets, facilitates international trade, plays a key role in the global economy and supports the tourism sector, contributing to social growth. In 2017, international trade in air travel is estimated to be worth nearly \$ 6 trillion, and air travel is estimated at \$ 711 billion. These indicators are growing one year after year. (IATA, 2017)

The aviation sector represented 3.6% of GDP globally in 2017. It supported a total of 65.5 million jobs worldwide, of which it provided 10 million direct jobs. In 2017, airlines launched 41.9 million scheduled flights, carrying nearly 4.1 billion passengers, 58.5% of whom travelled domestic and 41.5% on international travel for a total of 7.75 trillion kilometres. At regional level, Asia accounted for the largest share of passenger traffic, with Africa for the least. 26% of the passengers were of European origin. The industry is also growing in Europe. There were 667 commercial airports on the continent in 2014, rising to 671 by 2017. (ATAG, 2018 / a; ATAG, 2018 / b)

Aviation is constantly growing around the world, which will continue to support the creation of more jobs and more and more passengers.

## **3. SUSTAINABILITY AT AIRLINES**

Over time, more and more companies have invested in major sustainability and environmental issues as they enter the supply chain. This is no different in the aviation sector; more and more airlines recognize the importance of sustainability and voluntarily publish their corporate sustainability reports.

Heizer et al. (2016) describe three useful points for managing sustainability:

- A systemic approach can greatly improve corporate sustainability decisions. The life of a product should be monitored from design to disposal, including all necessary resources. The product or service itself is a small part of the larger social, economic and environmental systems;
- There are many things on earth that are common to anyone. Unfortunately, society has started to deplete or contaminate these resources. Society is trying to find solutions to the use of common resources through methods such as privatization of joint ownership, distribution of rights and distribution of wealth;
- One way of thinking about sustainability is for companies to create systems that support people, the planet and profits. For example, social responsibility (people), environmental responsibility (planet) and maintaining economic viability.

The core of sustainability was also influenced by various environmental, economic and political changes. As global warming and the depletion of natural resources become more and more apparent, companies are under increasing pressure, both nationally and internationally; industry and environmental rules, regulations, international agreements are becoming stricter. (Deutsch - Rideg, 2013)

A sustainable supply chain system requires a participant approach to sustainability. Through the supply chain, material, information and material processes that impact on society and the environment can be followed through. For this to have a positive impact, companies need to consider supply chain design not only to keep their strategic approach, operations, products and services sustainable, but also to consider the entire supply chain network, and the social and environmental impact of the processes therein. (Young et al., 2012)

#### **4. MODEL AND METHOD**

Michael Porter was the first to propose the concept of value chain in a service context from the perspective of air passenger transport. In this example, it skips the manufacturing process within the value chain activities and focuses on the steps of service delivery, highlighting cost characteristics. One of the most important features of the service value chain is its clear integration with all features that affect a company's ability to provide services to its customers. The most relevant of these functions are sales management, customer service and engineering.

The analysis relies on Porter's value chain, and within the primary activities, inbound logistics operations include the timely delivery of a wide range of aircraft, hospitality products and on-board products. The production phase involves the production and sale of goods and services to customers. Although outbound logistics mainly concerns manufacturing companies, it can also be applied in the service sector. In the case of airlines, it ensures the delivery of the finished product / service to consumers, such as the efficient handling of checked baggage at the destination using advanced information and communication systems. During the marketing and sales phase, the airline will use its strategy to deliver its own marketing message to the potential consumer. After-sales services generally include activities such as product / service comments and complaints from users. (British Airways Report, 2016)

In the following, a selected airline will be analysed based on Porter's service value chain from a sustainability perspective. Based on the analysis, we have sought to provide additional sustainable additions to existing ones.

#### **5. RESULTS**

In presenting the value chain below, it is based on the data published by WIZZ Air (wizzair.com, 2019) and its practical reflection.

##### **Primary activities:**

- **Inbound logistics:** WIZZ Air served 23.8 million passengers and operated routes to various airports in 42 countries, mainly operating in Europe and by the end of the year, operating 79 aircraft in 2017. They only have economy class on their aircraft. One important strategic element of the company is to operate only one family of aircraft, so it is more cost effective to operation, maintain and train the staff. Most flights depart from

and arrive at secondary airports, thereby maintaining their business policies and low fares. They do not provide transfer options within the company on their schedules. We deduce from this that they want to minimize the extra costs involved, and thus have a more flexible schedule. The company ordered 110 A321NEO aircraft, which will save 20% on fuel, reducing its ecological footprint. They also try to improve the weight of the machines by reducing the weight of seats and other equipment, using less fuel.

- **Operations:** The company had more than 3,000 employees who contributed to the successful operation of more than 400 flights daily in 2017. The Hungarian-affiliated company has a check-in counter at all airports, but passengers without checked-in luggage can check in from home online, thus avoiding queuing to speed up the check-in process. There is no need to print the boarding pass through the mobile application, just displaying the QR code, which saves paper usage. WIZZ Air sells its tickets exclusively through the Internet as individuals, groups and travel agents. We think this is also a cost-effective solution for the company and will save more administrations, which will result in less labour.

On-board services can be divided into two parts: WIZZ Café and WIZZ Boutique. In the previous service you can buy food and drink, the offer of which changes quarterly, while within the WIZZ Boutique service you can buy perfumes, cosmetics, and souvenirs. As the discount business model is used by the company, the passenger has to pay for any food and drink if they request one. The use of environmentally friendly materials (glasses, cutlery, packaging, mixing sticks, etc.) has not yet been introduced during on-board service. However, staff only issue plastic cups at the passenger's request, thereby reducing waste.

- **Outbound logistics:** For the company, security is the most important thing for both its passengers and its staff, and therefore a high level of security is addressed throughout the network. Changes in safety standards are continually monitored and applied at European and international level. Under their luggage system, passengers can carry luggage of varying sizes according to the types of tickets they purchase, in addition to luggage at an additional cost, making it more cost-effective to buy tickets.

The company offers discounted car rental and hotel reservations during and after the purchase of tickets, and in this respect, they also offer digitally available services.

- **Marketing and Sales:** The WIZZ Air website can be found through search engines or through airfare comparison websites. At the same time, the reputation of the company is known throughout Europe for its low fares, so the recommendation of passengers to others is considerable. The customer satisfaction is maintained through methods such as offering ongoing discounts or optional service selection by the traveller. The vibrant colours of the WIZZ brand are also easy to spot and connect. As a result of the market, they changed their image in 2015 and changed their slogan „Aviation for all”: „A world of opportunities”.
- **Service:** There are two ways to reach the company through passenger comments: by filling out a form through the company's website or by using one of their premium rate phone numbers. While browsing the Internet, there are many passenger complaints where the company has not cooperated, so this part of the company is not working properly. However, the fact that WIZZ Air is growing year by year and is now one of the largest airlines in Central Europe is controversial. Improving their complaint management would improve the quality of service and the popularity of the airline.

## Supporting activities

- **Company Infrastructure:** WIZZ Air has a strong brand knowledge and reputation across Europe. Through its business activities, they are constantly expanding their network with focusing on commuting overseas and the middle class who want to go on holiday. Their network extends to the Middle East, where there is future objective for expansion. The purpose of the low-cost model is to keep costs low, which is reflected in ticket prices as well as services. The company has several bases needed to maintain a point-to-point network. Their financial performance continued to grow in 2017, reflecting the airline's satisfactory and profitable operation.
- **Human Resources:** WIZZ Air has set up its own training centre in 2018. Each new pilot and cabin crew member must attend a separate training program. The trainers are still active WIZZ employees. In 2017, they announced their own pilot training program, called WIZZ Cadet, which will allow selected people to obtain their pilot's license and immediately begin work at the company. This allows them to employ up to 100 new pilots trained each year to meet the company's needs. This is how the ever-growing company wants to solve the problem of replacing pilots whose training is costly, so many people cannot start training on their own. The company predicts that they will need to employ 200 new pilots a year to maintain growth and prosperity. The company primarily recruits young people as a flight attendant, which fits well with the company's youthful image. It is important for them to meet the on-board staff, who represent the company's values and image appropriately, while having the appropriate expertise, whatever happens.
- **Technology:** The company operates only one type of aircraft, which is fully suited to short and medium haul operations. However, their aircraft order in 2017 demonstrates the company's commitment to reducing their ecological footprint. One of the company's competitive advantages is quick ticket purchase and passenger check-in. To this end, they are constantly developing their online booking platform and mobile app, which can be used to make a booking in as little as 30 seconds. Its web interface allows you to configure 24 languages and 11 applications via their application. The WIZZ Air website is the 8th most visited airline website worldwide.
- **Purchasing:** By the end of 2017, the company had 79 aircraft distributed on 87 bases based on utilization and passenger volume. This year, they announced their intentions to buy 110 Airbus A321neo and 10 A321ceo.  
For procurement, WIZZ Air's catering services are outsourced to Gate Gourmet Switzerland GmbH. WIZZ Air extended its contract with Gate Gourmet by another 7 years at the end of 2016 to continue managing the airline's end-to-end retail program. The airline also outsourced work processes such as on-board cleaning, aircraft maintenance, ground handling, staffing and catering, telephone support and accounting.

## Conclusion

There are many factors that shape the way airlines operate from passenger demand through safety and security procedures to industry-related authorities. It is shown that the characteristics of an efficient supply chain fit with low-cost airlines, as demand is met at the lowest possible cost, while traditional airlines tend to use a flexible supply chain to maintain quality.

Airlines are following trends to stay sustainable. The industry has in recent years begun to place greater emphasis on sustainability. It can be said that the investigated airline has also been

aware of the gravity of the situation and is trying to reduce their ecological footprint in several areas. For the time being, WIZZ Air stands out in the competition by operating modern, less fuel-efficient and less noisy aircraft. For sustainability and environmental awareness, the following is recommended to airlines worldwide in terms of service delivery:

- Design their strategy based on sustainability criteria with value added in mind,
- When ordering new aircraft, put more emphasis on material use from factories in addition to economical operation; where possible, use recycled materials (e.g. seat covers, plastic covers),
- Encourage passengers not to print their boarding pass (e.g. cash incentives, coupons),
- Avoid the use of plastics in their on-board catering services and seek to use recyclable or biodegradable, environmentally friendly tools (e.g. recycled paper cups, bamboo cutlery, compostable plates, wooden stirrers). No straws during on-board service,
- The on-board food supply should be adapted to locally produced and available ingredients, which will be subject to seasonal changes due to changes in supply,
- Print on-board newspapers on recycled paper, or offer on-board menus on harder paper that does not need to be replaced frequently and replaced,
- Separate collection of on-board waste and return it to recycling facilities,
- Announce the company's CO<sub>2</sub> emissions on an annual basis and set a target to be met,
- Encourage your travel public to use electric cars or public transport before and after their air travel,
- Encourage staff to learn environmentally friendly solutions in various areas of life,
- Reduce noise emissions by retrofitting and upgrading engines.

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# PRICE OF ALCOHOL IN EU MEMBER STATES – AFFORDABILITY OF ALCOHOLIC PRODUCTS AND ROLE OF EXCISE DUTIES

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**Abstract:** *This research paper focuses on alcoholic beverages and their price affordability between 2000-2016 in the member states of the European Union. Based on the data from OECD, WHO, Eurostat, and the European Commission, the paper primarily discusses development of prices and consumption of alcoholic products, level of excise duties, and the development of average wages. Overall alcohol consumption has decreased in most EU member states over the past two decades, even though price affordability has increased due to relatively dynamic development of average wages. As consumption of alcohol products is decreasing, producers of alcoholic beverages are now pushed to increase the prices of alcoholic products to keep their level of revenues, which means that the price of alcohol is growing naturally. Those facts raise a question about the role of excise duties on alcohol, whether it is an effective tool for reducing alcohol consumption or just a fiscal tool, whose further increases might lead to market distortions.*

**Keywords:** *Alcohol, Consumption, Excise duties, Price affordability.*

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## 1. INTRODUCTION

The overall consumption of alcoholic beverages in individual member states of the European Union differs significantly from state to state, a fact also supported by regularly updated data from internationally recognized organizations such as the WHO (World Health Organisation) or the OECD (Organisation for Economic Co-operation and Development). Globally, irresponsible consumption of alcohol causes up to three million deaths annually and is connected to approximately 5.1% of worldwide health complications. This is among the reasons why one of the most crucial recommendations for correct regulation of addictive behavior is to tighten up restrictive measures, meaning increasing excise duties, limiting sales of alcohol (locations and opening hours), restricting advertising alcohol, etc. (WHO, Global status report on alcohol and health 2018, 2018).

Regulating addictive behavior can more broadly be understood on two fundamental levels – restrictive and preventive (Babor & Robaina, 2013). Evaluating the efficiency of individual regulatory tools is however very complicated, mostly due to a number of other social phenomena (healthy lifestyle, change in patterns of consumption, etc.) that also determine the access of inhabitants to alcohol consumption (Collins, George, & Marlatt, 1985). The impact of such socio-economic phenomena can then only with difficulty be cleansed of the influence of regula-

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tions which makes it more complicated to determine which of the many regulatory tools should be implemented into national policies and thereby decreasing the negative impacts of irresponsible behavior (Alemanno & Garde, 2013). In other words: something that works or does not work elsewhere is not necessarily a guaranty that it will be effective in a different country or region.

Experiences of EU member states provide a wide variety of regulatory frameworks that are different not only in the number of implemented regulatory tools but also in the intensity of their settings. Excise duty is one of the most common tools for regulating addiction industries, which functions as a certain price barrier for both consumers and producers (Bareker, 2002). Commonly, excise duties are used for alcoholic beverages and tobacco products across all EU member states. Such duties can be applied either according to the content or weight of the given alcohol content in the final product, for which value added tax is also added. Conclusions of many studies show the positive impact of the amount of excise duty on the average consumption of alcoholic beverages in society, which is also associated with the decrease of negative socio-economic elements in connection with irresponsible alcohol consumption (Wagenaar, Salois, & Komro, 2009, Frieden, 2013, Pogue & Sgontz, 1989 or Cook, Ostermann, & Sloan, 2005). Such duty is however not only a tool to regulate unwanted consumption and negative socio-economic elements it causes but also a very effective fiscal tool that generates large additional income for state budgets (Grossman, 2005 or Harris, 1982).

Social wealth across all EU member states has increased significantly over the past two decades, as well as the market prices of alcoholic beverages. The goal of this paper is to evaluate how important of a role excise duty actually plays in regulating alcohol consumption within the context of continuous growth of market prices of alcoholic beverages and growing average wages of consumers. Is excise duty still an effective regulatory tool decreasing alcohol consumption or is its function purely fiscal? Do government increase its rates continuously only as a fig leaf for protecting public health?

## **2. METHODOLOGY**

Via comparative analysis, the paper compares the development of alcoholic beverages consumption, the affordability of alcohol, and changes of rates of excise duties for alcohol in nine member states of the European Union between 2000 and 2016. The sources of data are the databases of the OECD and WHO (alcohol consumption and its breakdown into beer, wine, and spirits in liters per person and year that are available only until 2016), as well as Eurostat (development of prices of alcoholic beverages – breakdown of the HICP index and development of the amount of average wages), the Euromonitor International – Passport database (current prices of alcoholic beverages), and the European Commission database (rates of excise duties). The resulting affordability of alcohol is measured as a ratio of average wage in the member state and the price of the given alcoholic beverage, meaning how much of the alcoholic beverage can a consumer purchase with his/her average wage in the member state. All data and information (including the rates of excise duties) have been analyzed until 2016 for the purposes of a comparison.

## **3. EXCISE DUTIES IN EU COUNTRIES**

The European Commission Directive 92/84/EEC determines the minimum rate of excise duties for all categories of alcoholic beverages. EU members states, therefore, can determine their own rates of excise duties according to the national policies; they have to be at least on the level

of the determined minimum. These minimum rates have been as follows in 2016: beer – 0.748 EUR per hl/degree Plato of finished product, wine (still and sparkling) – 0 EUR, ethyl alcohol (spirits) – 550 EUR per hectoliter of pure alcohol (European Commission, 2016).

First, we will analyze the changes of rates of excise duties for alcohol between 2004-2016. The rate of the duty differs across different EU member states, as well as its rate according to the type of alcoholic beverage. The development of excise duties for alcoholic beverages between 2004-2006 in selected EU member states is shown in Table 1.

### 3.1. Beer

There has been a relative increase (184.6%) in excise duties for beer in France, in Italy (91.2%), Finland (64.5%), and the Czech Republic (57.3%). The highest excise duty for beer was in Finland in 2016 (12.8 EUR/hl/°Plato). On the other hand, the lowest rates of excise duty for beer were in the CEE countries – in the Czech Republic (1.18 EUR/hl/°Plato), Slovakia (1.44 EUR/hl/°Plato), and Hungary (2.07 EUR/hl/°Plato).

### 3.2. Wine

Similarly to beer, the rates of excise duties for wine differ in the selected member states as well. The southern member states (Italy and Portugal) have a zero rating for still and sparkling wines (zero ratings for both wine types are also in Spain, Croatia, Cyprus, Lithuania, Poland, and Slovenia). A zero rating for still wines is also applied in CEE countries – Czech Republic, Hungary, and Slovakia. However, these member states do apply excise duties to sparkling wines (similarly, excise duties are applied to sparkling wines in Germany, Austria, and Romania). On the other, the highest rates of excise duty are applied in northern member states – Finland and Sweden, as well as in Ireland. The relative biggest growth of the duties was in Ireland and Finland – more than 50%.

### 3.3. Ethyl alcohol (spirits)

For spirits, there are also higher rates in northern Europe and Ireland; the rates in Finland increased by 61.2% between 2004-2016. On the other, the lowest and most comparable rates of excise duties are in CEE member states, as well as in southern Europe, where the rates almost doubled over the analyzed period.

**Table 1.** Excise duties on alcohol in selected EU countries

	Beer (EUR/hl/°Plato)*			Wine (EUR/hl)						Ethyl alcohol (spirits) (EUR/hl)		
				Still			Sparkling					
	2004	2016	Inc. (%)	2004	2016	Inc. (%)	2004	2016	Inc. (%)	2004	2016	Inc. (%)
<i>Western Europe</i>												
<b>FR</b>	1.04	2.96	184.6	3.4	3.77	10.9	8.4	9.33	11.1	1,450	1,738	19.9
<b>IE</b>	7.95	9.02	13.5	273	424.8	55.6	546	849.7	55.6	3,925	4,257	8.5
<i>Northern Europe</i>												
<b>FI</b>	7.78	12.8	64.5	212	339	59.9	212	339	59.9	2,825	4,555	61.2
<b>SE</b>	6.74	8.27	22.7	243	268.5	10.5	243	268.5	10.5	5,519	5,455	-1.2

<i>Southern Europe</i>												
<b>IT</b>	1.59	3.04	91.2	0	0	-	0	0	-	731	1,036	41.7
<b>PT</b>	2.47	3.19	29.1	0	0	-	0	0	-	898	1,328	47.9
<i>Central and Eastern Europe</i>												
<b>CZ</b>	0.75	1.18	57.3	0	0	0	73.37	86.11	17.4	831	1,049	26.2
<b>HU</b>	1.65	2.07	25.5	3.15	0	-100	35.91	52.62	46.5	756	1,066	
<b>SK</b>	1.21	1.44	19	0	0	0	58.15	79.65	37.0	606	1,080	78.2

\* For the sake of comparison, 1 degree Plato is equivalent of 0.4 % Alcohol.

**Source:** European Commission, 2016

#### 4. AFFORDABILITY OF ALCOHOLIC PRODUCTS

The affordability of alcoholic beverages is among other determined by the level of wages in the member states and the price level – the prices of purchased products. The development of average wages between 2000-2016 in selected EU member states is shown in Table 2. The relatively highest growth of average wages happened in CEE Europe where the wages almost doubled; the lowest increase was in Italy.

**Table 2.** Average monthly net wage in selected EU countries, single person without children, 100% of AW (EUR, net earnings)

	2000	2016	Change (%)
<i>Western Europe</i>			
<b>France</b>	1,577	2,243	42
<b>Ireland</b>	1,746	2,779	59
<i>Northern Europe</i>			
<b>Finland</b>	1,453	2,526	74
<b>Sweden</b>	1,724	2,809	63
<i>Southern Europe</i>			
<b>Italy</b>	1,274	1,758	38
<b>Portugal</b>	706	1,067	51
<i>Middle and Eastern Europe</i>			
<b>Czech Republic</b>	292	787	170
<b>Hungary</b>	224	595	166
<b>Slovakia</b>	338	702	108

**Source:** Eurostat, 2020

The growth of prices of alcoholic beverages between 2000-2016 is illustrated by the HICP index in Table 3. For beer, the highest price growth was in Portugal (51.99 p.b.) and Hungary (42.64 p.b.). In Ireland, the price of beer remained the same between 2000 and 2016; the relatively lowest growth happened in Sweden and Finland. When it comes to wine, the highest price growth was in Hungary (41.75 p.b.) and Italy (29.7 p.b.). On the other hand, the highest increase was in Ireland. The price of spirits grew the fastest in Hungary (55.08 p.b.), the slowest in Finland (3.16 p.b.) and Sweden (7.11 p.b.).

**Table 3.** HICP - Annual average index (beer, wine, and spirits) in selected EU countries (2015=100)

	Beer			Wine			Spirits		
	2000	2016	Change (%)	2000	2016	Change (%)	2000	2016	Change (%)
<i>Western Europe</i>									
<b>France</b>	74.68	99.86	25.18	75.96	101.56	25.6	81.93	100.13	18.2

<b>Ireland</b>	97.9	97.9	0	88.1	95.7	7.6	80.4	99.8	19.4
<i>Northern Europe</i>									
<b>Finland</b>	80.93	99.52	18.59	82.67	100.02	17.35	96.98	100.14	3.16
<b>Sweden</b>	84.17	100.14	15.97	89.54	100.62	11.08	93.16	100.27	7.11
<i>Southern Europe</i>									
<b>Italy</b>	68.9	100.1	31.2	70.2	99.9	29.7	74.0	100.9	26.9
<b>Portugal</b>	50.45	102.44	51.99	86.13	99.92	13.79	77.24	102.76	25.52
<i>Middle and Eastern Europe</i>									
<b>Czech Re- public</b>	73.8	103.9	30.1	85.8	101.5	15.7	69.9	104.6	34.7
<b>Hungary</b>	55.36	98.00	42.64	58.78	100.53	41.75	44.47	99.55	55.08
<b>Slovakia</b>	62.37	99.16	36.79	77.25	99.30	22.05	75.62	99.43	23.81

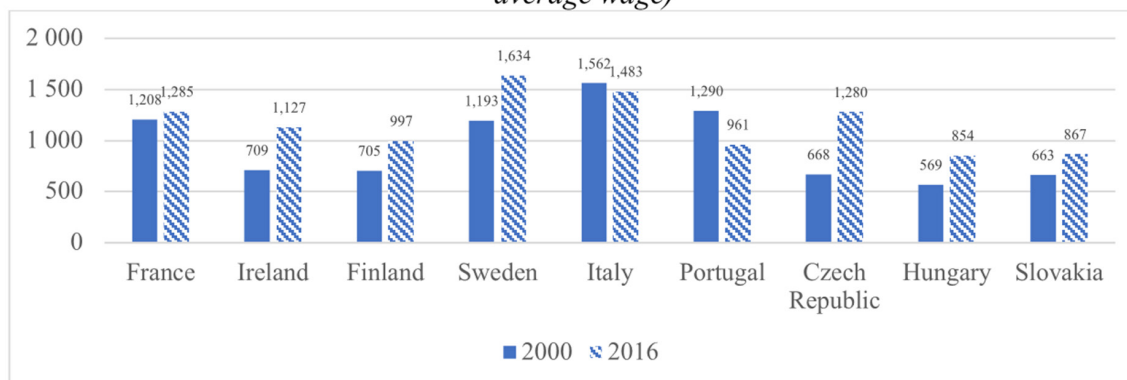
Source: Eurostat, 2020

The series of the following graphs illustrates the changes of affordability, meaning how much of a given alcoholic beverage can a consumer buy for his/her average wage in a specific member state between 2000 and 2016.

#### 4.1. Beer (0.5 l bottle of domestic beer)

From the perspective of affordability of beer, the highest increase was in the Czech Republic (92%). The average consumer in Ireland could purchase 59% more beer in 2016 than in 2000; in Hungary, the growth of affordability was 50%. A relatively significant growth was also experienced in Finland (41%) and Sweden (37%). The only analyzed member states that experienced a decrease of affordability of beer were Portugal (-26%) and Italy (-5%).

Figure 1. Price affordability of beer in selected EU countries (number of bottles of beers per average wage)

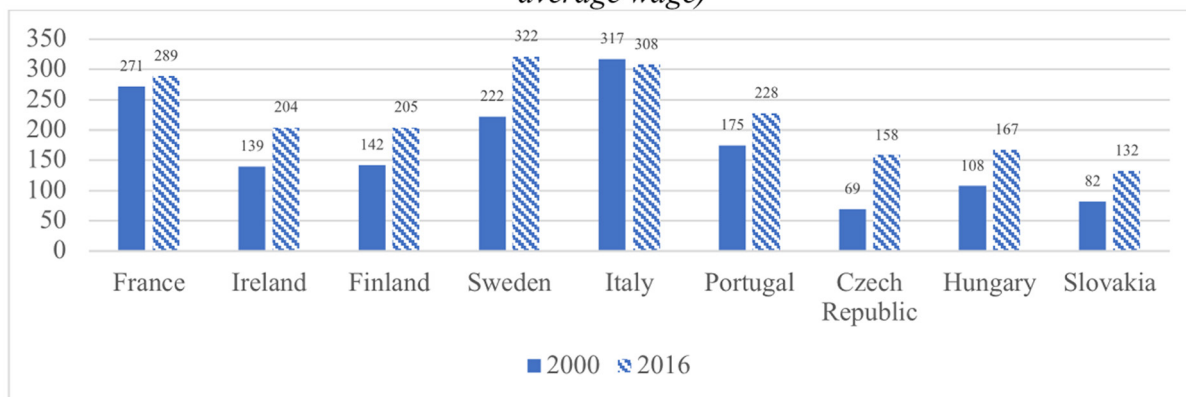


Source: Eurostat, 2020, Euromonitor International, 2020, own calculations

#### 4.2. Wine (0.75 l bottle of red wine – mid range)

The highest growth of affordability of wine happened in CEE member states, the highest in the Czech Republic (128%). On the other hand, the lowest growth was in France (6%); there was a decrease in Italy (-3%). Almost a comparable growth of affordability of wine was in all northern member states – Finland (44%), Sweden (45%), and Ireland (46%).

Figure 2. Affordability of wine in selected EU countries (number of bottles of wines per average wage)

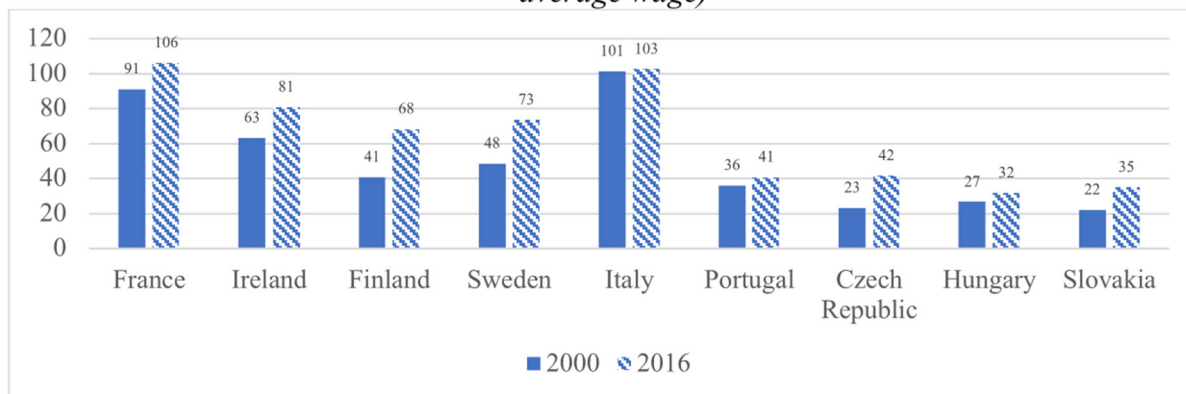


Source: Eurostat, 2020, Euromonitor International, 2020, own calculations

### 4.3. Spirits (1 l bottle of vodka – mid range)

The affordability of spirits increased the most in the Czech Republic (80%), Finland (68%), Slovakia (58%), and Sweden (51%). On the other hand, the lowest growth was in Italy (1%), Portugal (14%), and Hungary (19%).

Figure 3. Affordability of spirits in selected EU countries (number of bottles of vodka per average wage)



Source: Eurostat, 2020, Euromonitor International, 2020, own calculations

## 5. ALCOHOL CONSUMPTION

Now, let us focus on the development of the index of average alcohol measured in liters of pure alcohol per person and year. This and many other indicators that are connected to alcohol consumption are regularly processed and monitored by international recognized organizations, such as the OECD or WHO. Although the methodological tools for data collections of these two organizations are the same or very well comparable, their statistics are in many cases different. The development of these values is shown in Table 4.

As part of WHO's statistic, the largest decrease in average alcohol consumption (liter of pure alcohol/person/year) was in Italy (-27.6%), Portugal (-18.3%), and Ireland (-17.3%). On the other hand, the consumption increased in Sweden (by 16.1%). The relatively lowest decrease was in Finland (-2.3%).

**Table 4.** Overall alcohol consumption in selected EU countries (l of pure alcohol/ person / year)

	OECD			WHO		
	2000	2017	Change (%)	2000	2016	Change (%)
<i>Western Europe</i>						
<b>France</b>	13.9	11.7	-15.8 %	13.6	11.7	-14.0
<b>Ireland</b>	14.2	11	-22.5 %	13.9	11.5	-17.3
<i>Northern Europe</i>						
<b>Finland</b>	8.6	8.4	-2.3 %	8.6	8.4	-2.3
<b>Sweden</b>	6.2	7.1	14.5 %	6.2	7.2	16.1
<i>Southern Europe</i>						
<b>Italy</b>	9.8	7.6**	-22.4 %	9.8	7.1	-27.6
<b>Portugal</b>	13.1	10.7**	-18.3 %	13.1	10.7	-18.3
<i>Middle and Eastern Europe</i>						
<b>Czech Republic</b>	11.8	11.6	-1.7 %	13.9	12.9	-7.2
<b>Hungary</b>	12	11.1**	-7.5 %	12.2	10.9*	-10.7
<b>Slovakia</b>	11	9.7	-11.8 %	11.1	10.1	-9.0

\* The latest available data from 2015

\*\* The latest available data from 2016

**Source:** OECD, 2020, WHO, 2020

The WHO database additionally offers (unlike the OECD statistics) a breakdown of alcohol consumption according to the type of the alcoholic beverage – beer, wine, and spirits (see Table 5).

**Table 5.** Beer, wine, and spirits consumption in selected EU countries (l of pure alcohol/ person / year)

	Beer			Wine			Spirits		
	2000	2016	Change (%)	2000	2016	Change (%)	2000	2016	Change (%)
<i>Western Europe</i>									
<b>France</b>	2.08	2.21	6.3	8.59	6.90	-19.7	2.71	2.43	-10.3
<b>Ireland</b>	7.89	5.39	-31.7	1.76	3.21	82.4	2.98	2.15	-27.9
<i>Northern Europe</i>									
<b>Finland</b>	4.27	4.11	-3.7	1.07	1.74	62.6	2.22	1.81	-18.5
<b>Sweden</b>	2.7	2.61	-3.3	2.20	3.43	55.9	1.30	1.01	-22.3
<i>Southern Europe</i>									
<b>Italy</b>	1.64	1.80	9.8	7.06	4.58	-35.1	1.07	0.69	-35.5
<b>Portugal</b>	3.75	2.79	-25.6	7.74	6.55	-15.4	1.57	0.82	-47.8
<i>Middle and Eastern Europe</i>									
<b>Czech Republic</b>	7.64	6.92	-9.4	2.39	2.77	15.9	3.94	3.30	-16.2
<b>Hungary</b>	4.3	3.93*	-8.6	4.08	3.41*	-16.4	3.85	3.57*	-7.3
<b>Slovakia</b>	4.47	3.42	-23.5	1.49	2.12	42.3	4.85	4.24	-12.6

\* The latest available data from 2015

**Source:** WHO, 2020

## 6. DISCUSSION

Based on the stated data, we can compare the development of rates of excise duties for alcohol, affordability of alcoholic beverages, and their average consumption in given member states. As part of the comparative analysis, we came to the following findings:

### Beer

- Even though the excise duty for beer increased by 184% in France and its affordability remained practically unchanged (increase by 6%), the overall consumption of beer increased by 6.3% (the only analyzed member state with this phenomenon).
- When it comes to beer consumption, a similar phenomenon also happened in Italy. Here, the excise duty for beer increased by 91.2% and its overall affordability decreased by 5%. Despite the relatively high increase in excise duty, the average consumption of beer increased by 9.8%.
- An opposite phenomenon was in Ireland. Here, the excise duty for beer relatively increased (13.5%); beer affordability increased by 59% and the average consumption decreased by 31.7% - the most in all analyzed member states.
- The relatively lowest decreases of average beer consumption happened in Finland (-3.7%) and Sweden (-3.3%) which are member states of the EU known for their high excise duties. In Finland, the increase of excise duty for beer was 64.5%, in Sweden 22.7%.

### Wine

- The highest increase of excise duty for still wine was in Ireland (55.6%) and Finland (59.9%). In these countries, the affordability of wine also comparably increased – Ireland (46%) and Finland (44%). Despite the relatively high increase in excise tax for wine, the average wine consumption also increased – in Ireland by 82.4% and in Finland by 62.6%.
- In Italy and Portugal, there is a zero excise duty rating for still wines. In Italy, the affordability of wine decreased by 3%; in Portugal it increased by 3%, which is a below-average result among the analyzed member states. Despite the zero rating of excise tax, the average wine consumption decreased in both member states – in Italy by 35.1% and in Portugal by 15.4%.
- On the other hand, in the Czech Republic and Slovakia, where there are also zero ratings for still wine, the affordability increased significantly – in the Czech Republic by 128%, in Slovakia by 62%. In both countries, the increase of average wine consumption also increased – in the Czech Republic by 15.9%, in Slovakia by 42.3%.

### Spirits

- Sweden was the only from the analyzed member states where the excise duty rate for spirits decreased by 1.2%. The affordability increased by 51%; however, the average consumption of spirits decreased by 22.3%.
- The highest increase of excise duty for spirits happened in Slovakia (78.2%) where the affordability of spirits increased by 58%. The average consumption of spirits decreased by 12.6%, which is a below-average results in comparison with the other analyzed member states. On the other hand, in Portugal, there was an increase of excise tax by 47.9% but the affordability of spirits increased only by 14% and the average consumption decreased by 47.8%. A similar development happened in Italy.



The affordability of alcohol across all analyzed EU member states increased (with the only exception being Italy), meaning that the prices of alcoholic beverages increase slower than the growth of the average wages in said countries. This does however not mean that the average alcohol consumption increased in the analyzed member states. On the contrary, in all analyzed member states, the average alcohol consumption decreased, except in Sweden. The above-mentioned results prove that significantly increasing the excise duty rate on specific alcoholic beverages does not guarantee the decrease in its consumption – proven by the fact that in some cases the zero rating of excise duty was upheld over the entire analyzed period, however the consumption did not naturally decrease.

## 7. FUTURE RESEARCH DIRECTIONS

Beside the average alcohol consumption in society, it is also crucial to observe the development of negative socio-economic indicators that are connected to irresponsible alcohol consumption, e.g. traffic accidents caused by driving under influence, deaths by alcohol-related illnesses, alcohol consumption by minors, etc. These are the social phenomena that can be decreased and eliminated using an appropriate mixture of regulatory tools; we should not focus only on the often-cited indicator of average alcohol consumption. One of the future research directions could therefore be analyzing and statistically evaluating the effectiveness of regulatory frameworks within the context of the development of these unwanted socio-economic phenomena connected to alcohol consumption, including the statistical relevancy of the impact of increasing the rate of excise duties for alcohol on the development of alcohol consumption.

## 8. CONCLUSION

In the case of alcohol, a restrictive tool such as the excise duty cannot be simply understood as a time-tested tool for effectively regulating addictive behavior, which is why it is incredibly crucial when implementing and defining regulatory frameworks to also further analyze the reactions of consumers to restrictive and preventive measures. A socially desired decrease of alcohol consumption as well as the elimination of undesired health and social impacts can only be achieved via an appropriate setting of regulatory and preventive measures that have to also match the overall context of social developments and current approach of the inhabitants to alcohol in the given region.

## ACKNOWLEDGMENT

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# INNOVATE SCHOOLS: THE DIFFERENCE

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DOI:

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**Abstract:** *Schools are currently facing considerable challenges, as the paradigm of today's society is very different from the view for which most education systems were created. It's beginning from this principle that many schools in Portugal seek to modify, adapt and improve their teaching practices. Another of the principles that guided this study is the search for good examples at European level. It's important to create an innovative school culture, marked by collaborative work, openness of school to families, the surrounding environment and a commitment to shared leadership that ensures the sustainability of the innovative culture.*

**Keywords:** *Management, Innovate, Learning process, School.*

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## 1. INTRODUCTION

The current paradigm of the society in which we live allows us to see that many schools and school systems seek answers to the challenges of the present and the future. Innovative schools represent a theme that interests many of the teachers in office, such as parents, pupils and society at large. This interest comes from natural curiosity, from wanting to understand how some schools choose different strategies and after a few years they can achieve good results. With a media outlet interested in education-related topics, where schools are often presented that risk and become success stories, the theme of innovative schools is now of considerable relevance.

The present study, on the theme of Innovative Schools, has as object of study the empirical knowledge of seven school principals or groupings of schools from six different countries. Of the interviewees, we have two Portuguese directors, a Finnish director, a Norwegian director, a Dutch director, an English director and a French director. We sought, keeping the theme of study, the Innovative Schools, that the sample had the representativeness of different currents of teaching, from the north to the south of Europe.

Respondent No. 1 is the director of a group of schools in Portugal, of Portuguese nationality and with more than 16 years of experience in school management. Its leadership and grouping of schools (EAs) are recognized at national level for innovation and the bold measures they take to reform the school's education policy. It should be noted that this type of posture has been valid for the director and his AE got a wide media coverage at national level (E1).

Interviewee No. 2, of French nationality, is the director of an experimental school, which belongs to the Federation of Innovative Schools in France. This school was founded 35 years ago, with the aim of combating school failure. In this school, management is shared by the entire

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school, and the director is selected, on a rotating, rotational way by his peers. The watchword for this school and the principal is collaborative work (E2).

Respondent No. 3 is a Norwegian principal, recognized for the risky and innovative way he introduced the LEAN methodology for improving quality in his school. It is internationally recognized by users of this quality improvement methodology. The LEAN methodology is an integration of methods and tools developed in the 1990s in the industrial sector and, in particular, in the automotive industry. This strategy is now used by several schools, but this principal's school was a precursor in its use. In his interview, the principal repeatedly mentions a question that always asks his teachers when he wants to do something new. The question is, „... *why we should do this and why we should not do it*”(E3).

The fourth interview was conducted with the director of the EA in Portugal. The director, of Portuguese nationality, has extensive experience in school management and has followed many of the reforms that have taken place in the Portuguese educational system in the last 20 years. The AE she directs was once a pilot school and, according to the principal, is always open to conducting academic studies, as was the case in this investigation. The most relevant phrase uttered by the director was as follows: „*I believe that knowledge in innovation is important for us to make good choices and is fundamental in any school*”(E4).

Interviewee 5 is a director of Dutch nationality and has considerable international experience in school management. This director, fruit of her experience, has several very interesting quotes in her interview, being the difficult choice. Still, by its relevance has to be pointed out the phrase where the director says that what she considers most important in an innovation. For the director is „(...) *added value for the community, with the development of innovative social projects that contribute to the environment. Innovation exists to improve the world and to do so we must start with our community*”(E5).

Interviewee 6 is a young director of a Finnish international school in an eastern European capital. Finland, with the success that is recognized to its educational policy, exports its Finnish school model to several countries in the world. It is within the framework of the relationship with the family that we have selected a first sentence of this director. It is noteworthy when he mentions that „... *parents are very interested in coming to school, they know they are always welcome*”(E6).

The seventh principal interviewed, is a principal with extensive experience in school management and is currently director of a school of the European Schools System. This system is part of the institutions of the European Union and its model, its configuration and organisation are extremely innovative, essentially in terms of the linguistic richness it provides to its students. This director states that „... *innovation is considered important when it can make the school a better experience for students*”(E7).

## 2. REVISION OF THE LITERATURE

It is in this chapter that, through the information obtained by the research carried out, the theme of Innovative Schools is intended to be contextualized. Thus, the bibliographic research fell on national and international sources, in the field of research and literature within the contexts under study. Research on doctoral and master's theses on the issue of innovation in education was also taken into account, because „(...) all research work is written in a *continuum* and can

be situated within, or in relation to, currents of thought that precede or influence it” (Quivy and Campenhoudt, 2005: 50).

The theme of Innovative Schools is considerably present in our daily lives, even if it does not explain, it appears implicitly in most topics related to education. As a starting point for bibliographic research, key terms were defined that are today the greatest challenges of school leaders. Equity, inclusion, educational success, entrepreneurial pedagogy, active methodologies, pedagogical differentiation, formative evaluation, the relationship between school and family are topics addressed daily in our schools.

## **2.1. Innovation**

Innovation has to be seen as an endless process, an attitude, a way of being, because it is an endless action, which must be in constant evaluation. It should also represent a conscious, intentional and deliberate change, led by innovative intentions and should not be exclusively linked to the introduction of technology.

## **2.2. Innovation in Education**

The concept of innovation in education is not much different from the one mentioned above. For Goldberg (1995) it is a „(...) planned and scientific process to develop and implement in the captive Edu System change, whose possibilities of occurring frequently are few, but whose effects represent a real improvement for the system” (Goldberg, 1995: 198).

In the field of education, we can see that innovation presents itself in different dimensions. From the macro dimension, with policy makers using the intention to innovate in their discourses and through legislative intentions, at the intermediate level, with school management thinking of a new school, better adapted to its students, to the micro level, with the teacher innovating daily in their pedagogical practices.

Being commendable legislative initiatives, they are often conditioned by the difficulties of varying order faced by schools today, because „recent international surveys draw attention to the gap between what education systems would like to do and what they do”(Perrenoud, 2002: 1).

It is in this context that innovative leaders can make a difference. Several of the directors interviewed, within the scope of this study on Innovative Schools, report that „*innovation is not done by Decree-Law*”. In schools, their entire educational community has to believe in these measures so that they can succeed. This is how we move on to an intermediate level of intervention.

## **3. WHY TO INCORPORATE INNOVATION IN THE MANAGEMENT OF A SCHOOL?**

The identification of the various competences determines the concept field on which it is possible to establish the action logic of each school where entrepreneurial pedagogy is a strategy that will allow the learner to have freedom to perform your choice, because it will take over all the control of the development process and its aftermath, analyzing the feasibility and your ability to generate self-realization, always according to your degree of maturity through exercises that accompany it always.

### 3.1. What importance innovation has for the principal and the school?

From the cross-sectional reading of the answers to the question of the importance of innovation, we found that all the directors interviewed consider this theme very important, presenting as arguments the fact that innovation allows them to be updated with what is happening in society or that it allows them to provide students and teachers with a different experience of school.

Innovation is also used as a strategy to improve the quality of school functioning, in an almost business vision, supporting good options. But as the school is a distinct institution, innovation is presented by most principals as important to students, training students prepared for a world in permanent change, favouring innovative minds.

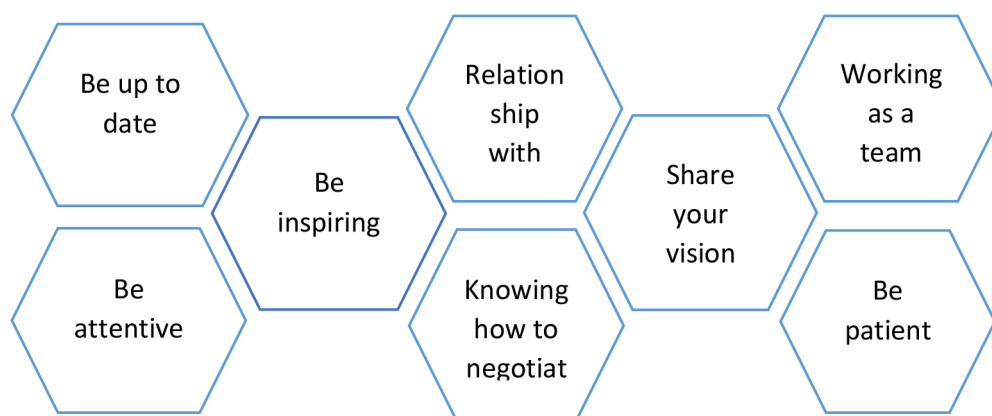
The most relevant citation presented in the answer to this question and which also reflects the opinion of the majority of respondents was as follows:

*„I believe that in a world in constant change and with an enormous amount of information that we have to deal with, we need to invest in creativity and innovative minds to succeed in the world”(E5).*

### 3.2. The skills that an innovative leader should develop

The competencies indicated by the interviewees as fundamental to an innovative leader are the relationship with the other, the ability to negotiate, to share with others their vision of the school being inspiring, being patient, betting on teamwork, knowing how to build a good team, but always following the process closely. You have to be interested, always keeping up to date with what is happening, betting on your professional training.

*„(...) the most important competencies are the relationship, the way it relates to people, the ability to negotiate, negotiate in all situations, in the noble sense of the word, as a positive aspect and, fundamentally, patience that is something that people do not have, things cannot be done overnight, you need to be patient, know how to wait for what will happen with the measures that will be implemented” (E1).*



**Figure 1:** Key skills for an innovative leader

Source: Own source

### 3.3. What mechanisms or practices exist in the schools of the interviewees to promote an innovative attitude?

From the analysis of the answers, we can conclude that there is no development of specific mechanisms or practices for the promotion of innovation in the culture of schools.

*„What we have is very generic, because we are an experimental school and our entire structure is innovative, both at the administrative level, where we are an establishment with its own management”(E2).*

What is mentioned by the majority of respondents is that the big bet is made in the culture of the school, being it the tool to develop in the school community an innovative spirit. It should be part of the attitude of students, teachers and families.

The English principal interviewed in the context of this study, says that he tries to instil in his teachers the idea that his school should try to get to where no school was.



**Figure 2:** Promoting an innovative attitude

Source: Own source

### 3.4. Relevance attributed to the establishment of partnerships

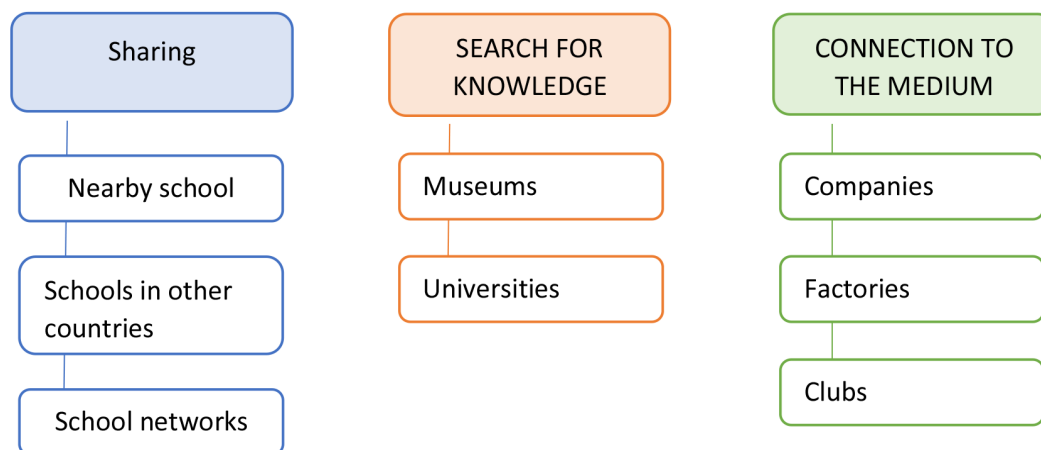
The theme of the importance of establishing partnerships is considered by all directors as fundamental. Almost the schools indicate partnerships, with the institutions that are in the environment, with universities, museums, with other schools or with factories that are close to the school. Partnerships with universities have a special character and are seen as an important asset:

*„The academy is fundamental to scientificize what we are doing a little empirically”(E1).*

These links are presented as very important for education to become more relevant, seeking most directors a great openness to the outside.

*„Teachers set up projects taking into account the structures that are close to the school (...). Making connections with the environment is very important to make education relevant” (E3).*

The creation of networks of schools that cooperate, share experience and help each other is pointed out by the interviewees as a good partnership.



**Figure 3:** Types of partnership

Source: Own source

#### 4. FUTURE RESEARCH DIRECTIONS

Since Innovative Schools are a considerable complex theme that can be studied at different levels, the study participants were asked what other variables can influence the introduction of innovative practices. Thus, the answers to this question suggested the deepening of the importance of the students' action, the importance of resources and the safety and the well-being of the community as promoters of an innovative attitude. Another theme that we should consider relevant for future research is the approach of innovation as an instrument for improving procedures, the organic structure of the school and working conditions, both for students and teachers. From this perspective, the Norwegian interviewee's school, which bases its internal functioning on the LEAN methodology, may be a relevant object of study.

#### 5. CONCLUSION

Some final considerations need to be made, summarizing the results obtained. The main motivation of the interviewees is to improve the pedagogical process, leaving organizational issues or working conditions behind the background. Only one of the directors interviewed presents a vision directed to the improvement of procedures, to the reorganization of work spaces, starting from a vision of continuous improvement with the introduction of the LEAN methodology in his school. The principal confesses that his school has „(...) more in common with factories and the private sector, than with other schools” (E3).

Based on the results obtained, we found that for the principals the involvement of teachers and families is crucial for the realization of the dissemination of innovative strategies. Being two members with an important weight in the educational community, they can also act as a difficult obstacle to transpose.

Formally, the director must bet on assertive communication with the EEs, building for this the best instruments to pass the information clearly and effectively. It should also promote moments of clarification, such as holding general meetings where the principal presents his vision of the school. The active involvement of families in school bodies should also be taken into account, as it allows participation in decisions and appropriation, by representatives of parents, of school culture.



But an informal approach to families, creating a sense of belonging to the community, should not be discouraged. EE should feel welcome at school. A culture of closeness between parents and teachers should be cultivated, as well as with school leadership. The directors interviewed attach a real importance to this strategy and reinforce the bonds informally through moments of conviviality, with the holding of parties, concerts and maintaining a daily contact of proximity.

It is through a combination of these two approaches that a very important plan for school leadership must be achieved, to have the trust of families. An interviewed director states that „(...) from the moment parents trust the school, it is possible to develop any project and parents are there to support” (E4).

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# THE ROLE OF THE DEPARTMENT COORDINATOR: LEADERSHIP AND SUPERVISION

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**Abstract:** *With greater autonomy schools require assertive leadership in school management. Thus, it is crucial to understand the intermediate manager's role in guiding a curriculum department, seeking to know how to validate their skills within the team. The department is shown functional, organized and communicative. Coordinator is spokesperson, democratic manager and performs duties within a framework of collaboration and valorisation, with joint decision and validation. Leadership is democratic and supervision relies on support for teachers and the figure of case manager emerges. Relevant constraints include bureaucracy and resistance to change. Functions in inclusive education, leadership, pedagogical supervision and in democratic, pedagogical, collaborative and mediating management are envisaged.*

**Keywords:** *Intermediate management, Department coordinator, Leadership, Supervision.*

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## 1. INTRODUCTION

The intermediate management structures, such as the curricular departments, are fundamental for the implementation of the different projects of the school, such as the PE (Educational Project) and the PAA (Annual Plan of Activities), crossing the role of the CDC (Curriculum Department Coordinator) with that of the other actors for the school's curriculum matrix to work. From this perspective, it is essential a great articulation between the departments, centered on *the currícula*, and the class councils, focused on the specificity of the classes (Santos et al., 2010). For these authors, strong and transformational leadership is crucial to the success of the school as an organization, which translates into an integrated vision of the school and the educational community, that is motivating and motivated and that develops management processes appropriate to the concrete needs and challenges of the school. Thus, a leading interim manager should have a unifying view of the efforts of all teachers he coordinates and points out paths to excellence, inclusion and diversity. It is therefore urgent to implement teamwork.

The intermediate manager has an important role in boosting teamwork, which will result in an improvement in the quality of the service provided by the school, so it should create conditions for the accomplishment of this work in a climate of permanent challenge and questioning. In the legislative building Portuguese the figure of the CDC emerges with new and renewed roles, re-focusing it within the school. Legal diplomas establish cultures of shared responsibility and the emergence of strong leaders. The CDC position is new in terms of teacher professional development. In this legal framework, it is urgent to understand how teachers perceive the leadership and supervision of the CDC.

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It is intended to understand how the skills of the school manager are validated within the team. Its general objective is to understand the role and competencies of the intermediate school manager in the guidance of a curricular department and as specific objectives, identify the functions and / or competencies performed by the department coordinator, recognize the characteristics that mirror their performance and identify the responsibilities assumed, difficulties and / or constraints in the exercise of the position. We opted for a descriptive and exploratory case study of an Alentejo AE, with a mixed approach. We applied a questionnaire survey to teachers, conducted semi-structured interviews with CDC and consulted official documents.

## **2. THEORETICAL FRAMEWORK**

### **2.1. School as an organization and its implications**

Many studies in school administration show concern about the distinction between school as an institution and organization, and then one of the perspectives is chosen. The first refers to the social, cultural and axiological dimensions of education, exercised by educational interactions between generations (Almeida, 2005). These dimensions are realized in the school as an organization. Castro (2010) argues that the school as an organization is based on relationships of interdependence and interaction between the various educational actors, which lead to a great complexity, poured into each of its elements, already complex. Bucha (2009) argues that the school is an educational organization, living, inserted in a system of interactions between educational actors and the curriculum.

### **2.2. School autonomy and intermediate management**

Today's Portuguese school is a social organization that brings together people in mutual interaction through particular organizational structures and processes that aim to achieve common educational objectives. On the other hand, changes in society require schools to be more able to reflect on their role and to have effective responses to respond to increasingly heterogeneous audiences in diverse contexts. In this way they can make use of their growing autonomy to respond and build their uniqueness and identity of the projects (Fialho & Cid, 2011) and, we add, the identity of the school itself, to be the strongest link in the community where it is inserted.

### **2.3. Department coordinator: leader and supervisor**

According to Canas (2011), the coordinators have an increased importance in the curricular articulation, in the organization, in the monitoring, in the realization and evaluation of the activities of the classes or groups of students, contributing decisively to the improvement of the students' learning and the quality of the school.

One of the functions is to contribute to combating the predictors of school failure by establishing the mentor figure of the CDC.

## **3. METHODOLOGY**

In a first phase of the study, we proceeded, as Fernandes (2002) assures us, to the bibliographical research of specialty books, articles and published studies related to the theme of empirical research. To answer the starting question and achieve the proposed objectives, we defined the methodological *design* of our study.

We chose a mixed approach, qualitative and quantitative in nature. The first allows us to know the individual perceptions of teachers (Bell, 2004) and the second, from the perspective of Innocent and Resendes (2014), translates an added value for research.

Our methodological choice for a complementary qualitative approach with quantitative approach does not diminish the scientificity of the study because, as Bogdan and Biklen (2013) assure us, qualitative research meets the requirements of scientific research, since they are based on empirical and systematic analysis of data. We intend to describe and understand the meanings constructed by the educational actors in their natural environment, to reveal the lived reality, which is multiple and dynamic and, thus, interpret social processes using reflexive and critical analysis of the narratives of the real as advocated by Silva (2013).

In our study we used the strategy of the descriptive case study, with the purpose of describing, explaining or exploring (Yin, 1994, 2001, 2009) or analyzing, problematizing the observed context to build knowledge (Ponte, 2006).

### **3.1. Data collection and analysis tools**

Considering the triangulation of methodologies (Stake, 2016; Innocent & Resendes, 2014) stated, we chose the questionnaire survey and semi-structured interviews as the fundamental techniques of data collection complemented with the documental analysis of structuring documents of the life of the SE.

After the survey of the state of the art, through the review of the literature on the subject, poured into the theoretical framework, we proceeded to the design, validation and administration of a questionnaire to obtain data and the construction of the interview script. Finally, the collected data are analyzed, processed and explained in the light of the theoretical framework.

The mixed approach, method, techniques and sources of information selected seemed to be the ones indicated for the empirical study in question, since it occurred in a real and specific context, facilitating the collection of data to sustain it.

### **3.2. Study participants**

To carry out our research it became necessary to delimit the field of analysis. In the wake of Quivy and Campenhoudt (2003:157), in addition to the data to be collected, it is imperative to *„circumscribe the field of empirical analyses in space, geographical and social, and in time”*. In order to avoid errors we chose a field of analysis circumscribed to curricular departments of a 2/3rd cycle and secondary AE.

Twelve teachers were interviewed by questionnaire and three coordinators were interviewed. The interviews after recording were transcribed following the advice of Amado (2014). Educators and teachers of the first cycle were not part of the study, since the departments are composed of teachers from the same teaching group, which keeps them away from the purposes of the study.

### **3.3. Data processing**

For Amado (2014) data analysis is central in research and it is crucial to analyse and interpret them, starting with organizing them.

**Table 1.** Matrix of categories of interviews to coordinators

Categories	Subcategories
Composition, organization and functioning of the curricular department	Adequacy according to disciplinary groups
	Affinities between recruitment groups
	Adequacy of the size to carry out the work
	Organization of the department
	Functioning of the department
	Contribution of teachers to the functioning of the department
Communication in the department	Communication processes in the department
	Communication rules
	Interaction between departments
	Mobilization of teachers
	Communicational climate
	Knowledge of information
	Communication feedback
Coordinator's choice	Selection criteria
	Most important criteria
	Selection method
Coordinator's roles/competencies	Coordination of pedagogical procedures
	Department management
	Ways of acting
	Delegation of competences
	Curricular articulation
	Inclusive education
	Pedagogical supervision
Performance evaluation	
Exercise of the post of coordinator	Leadership
	Training
	Intermediate management
	Pedagogical supervision
	Pedagogical coordination
Leadership practices	Types of leadership
	Conflict management
	Teacher follow-up
	Participation of teachers
	Performance of the coordinator
Supervisory practices	Supervision of pedagogical practice
	Monitoring, guidance and monitoring of the activity of teachers
	Professional development
Performance evaluation practices	Intervention in performance evaluation
	Delegation of competences
	Identification of performance evaluation dimensions
	Formative evaluation
Obstacles/constraints in the exercise of office	Typology of obstacles
	Specialised training
	Responsibilities assumed
Future prospects for the exercise of the position	Own career
	Emergence of new functions and new roles
	Leadership
	Supervision and performance evaluation
	Specialised training
	Time limitation
	New forms of management
Method of election	

Source: Own elaboration.

Quantitative data were recorded and treated using simple descriptive statistics using Excel software and qualitative data were subject to the content analysis technique that allows the comparison between the theoretical framework and the empirical data collected, being a flexible and adaptable technique to research (Amado, 2014).

From the content analysis performed, the significant elements of the interviews emerged, which allowed them to be assigned a systematic character, looking for patterns, phrases and events that would allow the development of a system of categories of codification of the most relevant data, poured into categories or subcategories, to facilitate reading, depending on the objectives of the investigation and the theoretical framework (Bogdan & Biklen, 2013).

We chose the mixed procedure to analyse the content of the interviews made to the department coordinators and in the conduct of them we follow the script built by us, being located in the closed procedure.

#### 4. FUTURE RESEARCH DIRECTIONS

It is a good thing to say that this is a small, non-exhaustive research study that portrays a small organic unit, so our results can serve as a starting point for other empirical investigations, in other contexts and with other educational actors.

In the course of the study we noticed that there are other areas that deserve to be deepened, such as inclusive education and curricular flexibility, which is now on the agenda. However, we think we have made a small contribution in the study of curriculum departments on leadership and pedagogical supervision.

#### 5. CONCLUSION

In this study we intend to understand the role and competencies of the intermediate school manager in the orientation of a curricular department. Thus, we seek to identify the functions and competencies performed by the coordinator, recognize the characteristics that mirror his/her performance and identify the responsibilities and constraints found in the exercise of the position. This intermediate manager, cornerstone in the school, coordinates curricular departments, object of study of our research in an AE. This is a case study, with a mixed approach, and qualitative data were collected, through interviews and official and quantitative documents, using a questionnaire applied to teachers to answer the starting question, *„how are the skills of the intermediate school manager validated within the team?“*.

The coordinators assume responsibilities in the coordination and democratic management of the department, promoting participation, interdisciplinarity, collaborative work among teachers and transmitting information in a timely manner. The pedagogical work is essentially the responsibility of the disciplinary groups led by the respective group delegates.

They assume the functions stipulated in the guiding documents, such as coordination, evaluation and definition of the learning profile of students, curricular flexibility and articulation, inclusive education, communication and discussion of school results.

At the leadership level, the study showed that the coordinators exhibit a democratic and participatory style, characterized as collaborative and mediating. There are bureaucratic focuses, which indicates that intermediate managers choose a style depending on the needs and circumstances. Pedagogical leadership, free of bureaucratic tasks, is essentially attributed to group delegates.

In the exercise of the position, they encounter constraints such as lack of time, bureaucracy, supervision, performance evaluation and conflict management. The high number of competencies to be exercised and the requirement of a high degree of knowledge of the legislation as well as the resistance of teachers to change and introduced dynamics are other constraints.

The future prospects for the exercise of the position are: knowing how to lead educational teams and foster collaborative work; increase democratic management; remain a spokesperson between the department and school bodies; have more hours to hold the position and manage the department based on pedagogical aspects, aiming at improving school results. As Silva and Santos (2018) tell us, an autonomous, democratic and participatory school contributes to the form of critical and reflective citizens.

We hope that the results of our study will encourage processes of democratic management participated in schools, agencies and the structures that compose it.

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# CONVERGENT APPROACH OF LIBERALIZATION AND REGIONAL INEQUALITIES - AN ANALYSIS

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**Abstract:** *Coherent integration for transformation and structural adjustments in the socio-political, economic and cultural realms of each unit within the framework of social democracy might have appeared to be contributory to market-efficiency and the objectives of neo-liberalization as well as economic growth. In the present dispensation the authors have taken the attempt to analyse scales of normative frameworks in the socio-political, socio-economic and cultural context under various timelines to suggest as alternative means, in addition to policy coherence for the sustainable developmental goals.*

**Keywords:** *Liberalization, Regional Inequalities, Sustainable Development*

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The 'bail-out incident' of Greece and subsequently 'Brexit' signify that *convergence initiatives* to attain social-equilibrium, economic growth and free-trade beyond the spectrum of geo-political boundaries by the formulation of a uniform and coherent governance policy and formation of European Union has not eventuated to be a unique exemplary model to other sovereigns across the globe. Coherent integration for transformation and structural adjustments in the socio-political, economic and cultural realms of each unit within the framework of *social democracy* might have appeared to be contributory to market-efficiency and the objectives of *neo-liberalization* as well as economic growth. And again, the *global trade policy* within the framework of WTO has also established social contradictions and provisions of *regional free trade agreements* hardly having any objective to contribute towards transformation and structural adjustments in the inter-countries' socio-political, socio-economic and cultural integration.

The relevant universe of redistribution of conditions of *equality* and substantial wealth for *sustainable development* are the operational contents of social policies of the nations; however, the issues of value-conflicts and efficiency-loss which may manifest from region to region should inevitably be designed in strategic manner within the rubric of the regulatory machinery by appreciating safety-net or social-insurance in a developing economy for upholding the worst-off people of the society so that the *disposable income* of such section could be at par with citizens of other regions and temporal characterization of market-oriented society in developed economy to avail of wealth-maximization on cost-consideration. Be it Gini Ratio, or Quintile methods, or Lorenz Curve, or Standard Deviation to surface the true picture of *inequality, poverty* in particular, the appreciation of *disposable income* of the poor people.

In the present dispensation the authors have taken the attempt to analyse scales of normative frameworks in the socio-political, socio-economic and cultural context under various timelines to suggest as alternative means, in addition to policy coherence for the sustainable developmental goals.

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Unrestricted flow of capital (includes private capital as well), goods and commodities and persons; continuous reformulation and review in the policy frameworks in social distribution and redistribution structure of every sovereign accordingly; and movement of individual natural persons, etc. across the globe, have been considered to be the basis of persistent progressive move in evolving multilateral trade policy.

Sustainable Development Goal programmes have been linked to such journey to reduce poverty and income-inequality. Thus evidently the question, evolves out on assembling the founding goals and objectives of such transformative Global Trade Policies, Global Sustainable Developmental Schemes, and the Social Democratic Principles of Transparency and Accountability as effective instrument of Good Global Governance Policy, is, the efficiency in such regulatory frameworks of the nations across the globe to harmonize, or coordinate, or attenuate the objectives of the aforesaid Global Policies and Schemes in bringing into being the sustainable environments and egalitarian societies.

Convergence approach with an aim at social cohesion as endeavoured by European Union to composite various geo-political boundaries has substantiated the inclination towards substantial increasing domestic regional inequalities and poverty.<sup>4</sup> The economic growth model of Solow<sup>5</sup> concluded the *convergence approach* that keeping the exogenous factors of technological progress in production if considered to be traded off, the flow of capital moves towards less developed regions, i.e., from richer regions to poorer regions to avoid the diminishing return of capital however, it fails to address the regional income inequality<sup>6</sup>. Again, the *economic geography* theory suggested<sup>7</sup> that the concentration of economic activities take place due to concentration of industrial production resulting in the migration of workers make such region(s) as potential market(s) thus due to such agglomeration of economic activities in endowed concentration of industrial production may be considered to be the grounds for increasing regional inequality in income and development thereof.

Therefore, for sustaining economic development of either '*market-income*' or '*disposable income*' of the citizens for at least median standard of earning, i.e., \$1.90 per day as measured by World Bank<sup>8</sup> to ensure the object of 2030 Agenda of UN Sustainable Development Goals as well as region-specific equal opportunities within the fold of such developmental scheme would be more meaningful. That the aspirations integrated within the fold of SDG schemes are chiefly economic, social, and environmental. Fact that, while the sustainable developmental schemes are being actuated, poor and arbitrary performances of the enforcement agencies as well as different weightage and variability in implementation conditioned and aligned from region to region, often experienced by the poor communities, mostly in developing economies. Inclusion of the material footprints of input-output analysis of resources to foster the SDG schemes from

<sup>4</sup> Doran, Justin., and Jordan, Declan., DECOMPOSING EUROPEAN NUTS2 REGIONAL INEQUALITY FROM 1980 to 2009: NATIONAL AND EUROPEAN POLICY IMPLICATIONS, *Journal of Economic Studies*, vol. 40 no. 1, ISSN: 0144-3585 available at <https://doi.org/10.1108/01443581311283484>.

<sup>5</sup> Solow, R.M., (1956), "A CONTRIBUTION TO THE THEORY OF ECONOMIC GROWTH" *The Quarterly Journal of Economics*, Vol 70, No.1, pp 65-94

<sup>6</sup> Heidenrich, M. and Wunder, C. (2008), "Patterns of regional inequality in the enlarged Europe", *European Social Review*, Vol. 24 No. 1, pp. 19-36.

<sup>7</sup> Fujita, M., Krugman, P. and Venables, A. (1999), *The Spatial Economy: Cities, Regions and International Trade*, MIT Press, Cambridge, MA.; Puga, D. (2002), "European regional policy in light of recent location theories", *Journal of Economic Geography*, Vol. 2 No. 4, pp. 373-406.

<sup>8</sup> Available at <https://data.worldbank.org/topic/poverty>

the recipient's point of view, customizing the operational challenges considering the future of regional economic developments on priority-based layers, and aligning those with the objectives of integrated Public Policy cycle<sup>9</sup>, like foundational - to impel from the economy of survival to accompany in availing of the opportunities as enlarged in *social justice* and *sustainable ecology*; short-term policy - to accentuate the space in laying down the alternative preference of *demand set* at micro-level on coming by above the level of survival economy, that is, *choice economy* for the progressive and valued output towards long-term benefits of the schemes driving towards the substantive contribution to the GDP; and long-term policy - to achieve the inclusive economic gain and integrated vision of the aforesaid global policies of SDG programmes.

Therefore, integration of the objectives of the global policies on '*liberalization of trade*', '*transparency* and *accountability*' in governance pattern of the nations for '*sustainable development*', require restructuring of the preferences considering the 'leverage-points' of development. Such structural policy framework with the institutional and regulatory regimes based upon priority-layers although would appear to be capital-intensive however, to achieve the eventuality as desired in the UN Mission of '*zero-poverty*' within the desired time-period of 2030 focus should be made on such meaningful utilitarianism.

Creation, construction and reconstruction of the economic space with *disposable income* amongst the poor at the micro-level would enable to contribute the preference sets of demand in the market which in turn would incentivize the value chain of supplies. The flow of capital to the poor regions to ensure better 'economic rents' upon investment as suggested in Solow's economic growth model might be affected however, sustaining-support by investors of such diminishing return of capital for the specified time-period of foundational level of development would evolve considerable capacity of purchasing power (what has been mentioned as '*disposable income*') amongst the poor because spending for consumption would positively not only lead the market forward rather it would evolve the socio-cultural practices as well amongst the subjects of sustainable development programmes and in turn, would emerge to be the contributory to appreciate the economic activities and market-potentials in the long run.

The tragic consequences of global pandemic, COVID-19, has already brought the global supply chain, international trade, and tourism into standstill, and almost all nations are on the planning fronts to formulate the emergency support programmes to sustain the economic growth as the said contiguous pandemic has already affected the consumption patterns and sectoral output of the countries across the globe due to direct impact of so many national shutdown measures<sup>10</sup>.

Thus, every nation with utmost would show its resilience, strength and unity would try to captivate the renewed challenges what in virtual G-20 summit of OECD<sup>11</sup> has been expected to be the severe financial recession in some economies of the globe in comparison to financial crisis in 2008-2009. Considering the enormous impact in terms of capital outflows, growing bond

<sup>9</sup> Integrating the three dimensions of sustainable development: A framework and tools, United Nations 2015 ST/ESCAP/2737, UNESCAP, available at [www.unescap.org](http://www.unescap.org) (last visited on Mar. 27, 2020 at 19:03 IST)

<sup>10</sup> 'Policymakers in the United States, Europe and Asia have slashed interest rates and opened liquidity taps to try to stabilize economies hit by quarantined consumers, broken supply chains, disrupted transport and paralyzed businesses' - <https://www.weforum.org/agenda/2020/03/coronavirus-deaths-italy-china-recession-economy/>(last visited on Mar. 31, 2020 at 13:04 IST)

<sup>11</sup> EVALUATING THE INITIAL IMPACT OF COVID-19 CONTAINMENT MEASURES ON ECONOMIC ACTIVITY © OECD 2020 held on March 23, 2020. Available at <http://www.oecd.org/newsroom/oecd-updates-g20-summit-on-outlook-for-global-economy.htm> (last visited on Apr. 3, 2020, 16:13 IST)

spreads, currency depreciations and lost export earnings, including from falling commodity prices and declining tourist revenues from the increasing shock-wave of present pandemic the UN in order to push on with the progressive move of the SDG programmes for the developing countries already calls for \$2.5 trillion coronavirus crisis package.

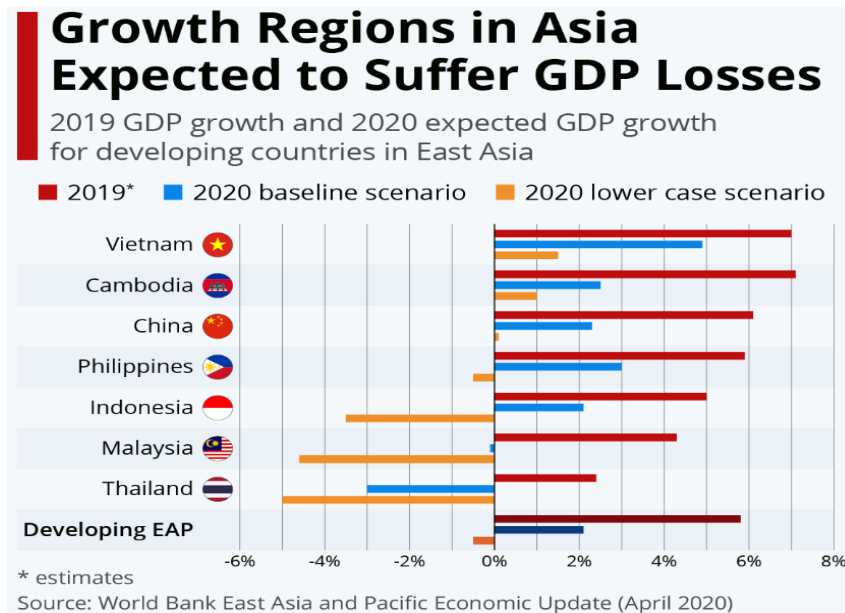


Figure 1.

Source: World Bank East Asia and Pacific Economy Update (April 2020)<sup>12</sup>

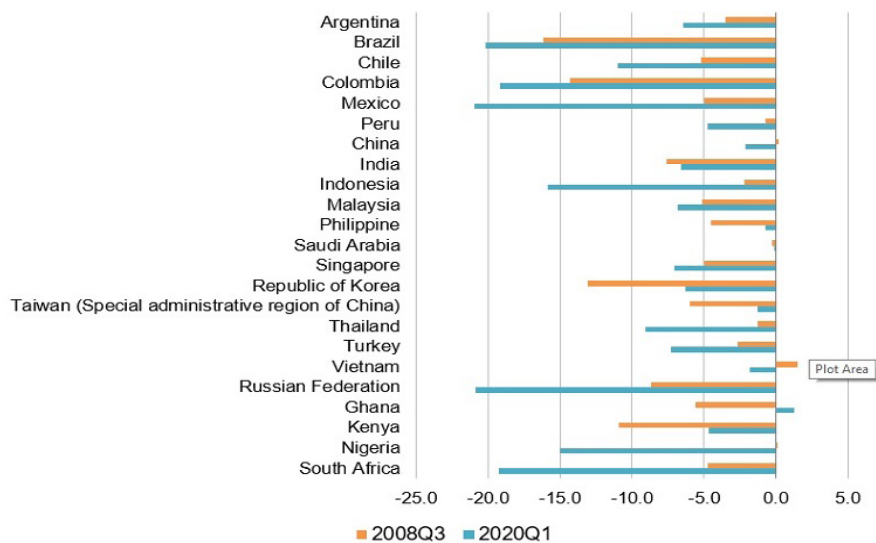


Figure 2. Currency movements against the dollar 2008Q3 vs 2020Q1 (percentage)

Source: UNCTAD secretariat calculations based on Thomson Reuters Eikon database<sup>13</sup>

Plausibility of layoff to the tune of 25 million has also been forewarned by ILO<sup>14</sup> and such cases of rising unemployment, if surfaces, would not only put pressure upon the concerned

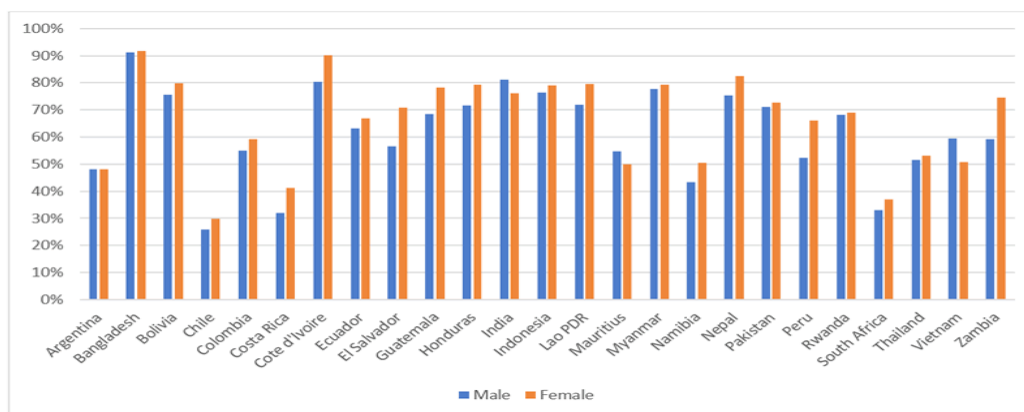
<sup>12</sup> <https://www.statista.com/chart/21293/projected-change-gdp-growth-coronavirus-developing-countries-asia/> (last visited on Apr 2, 2020 at 21:34 IST)

<sup>13</sup> Available at <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2315> (Last visited on Apr. 3, 2020 at 21:23 IST)

<sup>14</sup> <https://economictimes.indiatimes.com/news/economy/indicators/jobs-destroyed-worldwide-as-coronavirus-sparks-recession/articleshow/74978068.cms?from=mdr> (last visited on Apr 5, 2020 at 22:10 IST)

governments for the increased possibilities of falling back into poverty, even in some developed and industrialized economies of the globe, rather would annex burden upon the governments relating to social protection in implementing the beneficial schemes of SDG to accomplish ‘zero poverty’ within its time frame of 2030.

ILO has also apprehended, considering the temporary employment, the scope of gender inequality (Fig 3) as an eventuality of such global pandemic. To foster synergies between reshaping the economic vibrancy into the markets (mostly the shocks in labor productivity, factor productivity and trade as shown in Fig 4) in tandem with cycle of growth in pursuant to SDG programmes require to identify the ‘trade-offs’ of certain incentives to disparate stakeholders of the societies and explicit focus by the governments in its policy frameworks.



**Figure 3.** Part time employment (as % of total employment)

**Source:** ILOStat. Part time employment refers to regular employment in which working time is substantially less than normal<sup>15</sup>

	Base Value, bn USD 2011	LABOR PRODUCTIVITY SCENARIO	TOTAL FACTOR PRODUCTIVITY SCENARIO	TRADE COSTS SCENARIO
		Percent Change		
<b>REAL GDP</b>				
WORLD	111,387	-1.0	-1.0	-1.0
DEVELOPED COUNTRIES	66,362	-1.0	-1.0	-0.7
DEVELOPING COUNTRIES	45,024	-1.0	-1.0	-1.5
<b>HOUSEHOLD REAL CONSUMPTION</b>				
WORLD	46,746	-1.1	-1.0	-0.9
DEVELOPED COUNTRIES	30,268	-1.2	-1.0	-0.7
DEVELOPING COUNTRIES	16,477	-1.0	-1.0	-1.4
<b>REAL VALUE ADDED</b>				
<b>ALL GOODS</b>				
WORLD	36,924	-1.0	-1.0	-1.1
DEVELOPED COUNTRIES	16,778	-1.1	-0.9	-1.1
DEVELOPING COUNTRIES	20,145	-1.0	-1.0	-0.8
<b>AGRIFOOD PRODUCTS</b>				
WORLD	7,967	-0.9	-0.8	-0.9
DEVELOPED COUNTRIES	2,986	-0.9	-0.7	-0.8
DEVELOPING COUNTRIES	4,980	-0.9	-0.9	-0.6
<b>EXPORTS, CONSTANT DOLLARS</b>				
<b>ALL GOODS</b>				
WORLD	17,849	-1.1	-1.0	-13.8
DEVELOPED COUNTRIES	9,524	-1.1	-1.0	-12.4
DEVELOPING COUNTRIES	8,325	-1.1	-1.0	-15.4
<b>AGRIFOOD PRODUCTS</b>				
WORLD	1,498	-0.9	-0.8	-18.6
DEVELOPED COUNTRIES	849	-0.9	-0.8	-14.9
DEVELOPING COUNTRIES	649	-0.9	-0.8	-23.4

**Figure 4.** Macro-economic impacts of a 1% reduction in global economic growth

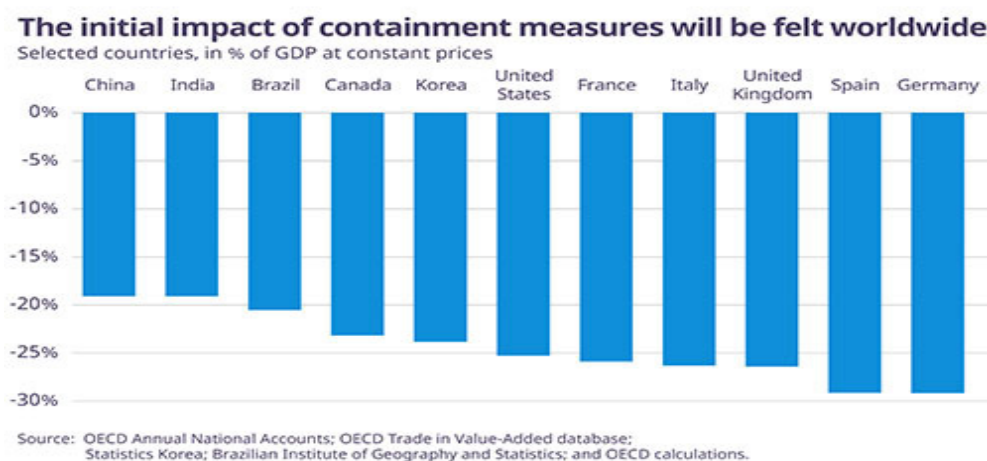
**Source:** MIRAGRODEP Simulations, IFPRI<sup>16</sup>

<sup>15</sup> Available at <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2319> (last visited on Apr. 5, 2020 at 21:13 IST)

<sup>16</sup> Available at <https://www.ifpri.org/blog/how-much-will-global-poverty-increase-because-covid-19> (last visited on Apr 2, 2020 at 09:23 IST)

The synergic approach of both institutional and market to support the poor to enable them to come out from the 'poverty-trap' for, mere subsidized aid might affect the inherent potential and urge to find out survival and prosperity amongst the poor communities in their livelihoods as well as encourages the implementing agencies to be the breeding ground of corruption and nepotism<sup>17</sup> and distorting to smooth market functioning also.

Recent research to address the global poverty made by Nobel Laureate Banerjee and Duflo<sup>18</sup> have come up with the recommendation to initiate the innovative tool of *micro-credit* amongst the poor for ensuring predictable and dependable income for, the majority of poor community experience the harsh realities and functional financial distress between the 'aid ideology' of sustainable developmental programmes and 'free market economy'.



**Figure 5.**

**Source:** OECD Annual National Accounts; OECD Trade in Value-Added database; Statistics Korea; Brazilian Institute of Geography and Statistics; and OECF Calculations<sup>19</sup>

Therefore, market-driven direction in the policy formulation aligning thereof the allocation of subsidies to each individual member of such vulnerable communities through strict compliance of institutional and normative frameworks would not only insist smooth functioning of the markets rather would motivate the poor communities to come up with own solutions to get rid of poverty. And again, the possible downturn in economy and GDP of both the developed and developing countries as estimated in Fig. 5 could be reduced to greater extent.

The increasing trends of democratization of norms with multidimensional challenges, immediacy in priorities, decay in value-based governance, political imperative-conflicts lack of integrity in accomplishing commitments, conflicts amongst disparate stakeholders in inclusive growth in participatory model of governance, poor implementation, are to mention a few. Inclination mostly upon cost-cutting governance mechanism and market-driven policy formulations raised most conflicts in smooth operationalization of beneficial goals of SDG programmes also. Such convergence with cooperative-collaboration amongst the regulatory bodies should be coherent in order to achieve the multidimensionality of developmental schemes. Such attempts neces-

<sup>17</sup> Moyo, Dambisa., *Dead Aid: Why Aid is Not Working and How There is a Better Way for Africa*, Penguin Books Ltd., London, U.K. 2010: ISBN 9780141031187

<sup>18</sup> Banerjee & Duflo, *POOR ECONOMICS: A RADICAL RETHINKING OF THE WAY TO FIGHT GLOBAL POVERTY*, BBS PUBLICAFFAIRS, NEW YORK

<sup>19</sup> <http://www.oecd.org/newsroom/oecd-updates-g20-summit-on-outlook-for-global-economy.htm> (last visited on Apr 5, 2020 at 13:23 IST)



sitate the focus upon the re-balancing of the right-liability correlations afresh in the context of new trend of market-driven policies of the State. The evolution of normative frameworks right through the civilized human civilizations traverse from *capitalism* to *mercantile capitalism*, then from *mercantile capitalism* to *state capitalism*, and now from *state capitalism* to *state-sponsored capitalism* and the singular character of *state-sponsored capitalism* is to embrace the private capital for the scales of economic growth and in participatory pattern of governance model.

Such encompass of diverse stakeholders within the framework of governance model has not only been giving some distinctly motivated stakeholders to thumb up to put unnecessary blockades either to cause delay and enjoy some benefits and advantages at individual end (including ‘economic rents’) or to dismantle the image of gradual successive progress. And such resistance at the policy making process or at implementation process are being asserted out of the conditions enlarged by the State when *state capitalism* was in force. Thus a revisit upon the existing right-duty correlations, enlarged by the State following the *state capitalism* as the economic model for the social progress are necessary and modifications of the same, i.e., rights-duties from the perspective of *state-sponsored capitalism* with specific focus upon the validation of responsibilities of the stakeholders both in policy as well as in institutional and normative frameworks, be it related to individual in the governance mechanism or as a contributor to the total GDP or GVA of the State, and any constraint made thereof in accomplishing the commitment made by the State before the international organizations would be made judicial intervention. In short, the institutional and normative frameworks should be responsibility-driven rather than right-driven one for the attainment of objectives of SDG programmes and regional inequalities and poverty.

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# OCJENA FINANCIJSKOG USPJEHA ENERGETSKIH KOMPANIJA: ISKUSTVO POSTTRANZICIJSKIH ZEMALJA EUROPSKE UNIJE

## FINANCIAL PERFORMANCE ASSESSMENT OF ENERGY COMPANIES: EXPERIENCE OF EU POST-TRANSITIONAL COUNTRIES

Dubravka Pekanov Starcevic<sup>1</sup> 

DOI:

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**Sažetak:** U okviru Klimatskog i energetskeg okvira do 2030. Europske unije postavljeni su ključni ciljevi za 2030. godinu: smanjenje emisija stakleničkih plinova za minimalno 40%, povećanje udjela obnovljive energije za minimalno 32% te poboljšanje energetske učinkovitosti za minimalno 32,5%, sve u odnosu na razine iz 1990. Europska unija snažno podupire energetske učinkovitost i prijelaz na obnovljive izvore energije. Navedeno zahtijeva značajne promjene u europskoj energetskej industriji; investiranje u niskouglične tehnologije uz istovremeno održavanje sigurnosti u opskrbi energijom. Promjene na energetskej tržištu utječu na financijskej uspješnost energetskej kompanija.

Cilj je ovoga rada ocijeniti financijskej uspješnost energetskej kompanija u posttranzicijskej zemljama Europske unije: Bugarskej, Češkej, Estonijej, Mađarskej, Latvijej, Litvej, Poljskej, Hrvatskej, Rumunjskej, Slovačkej i Slovenijej. Istraživanje uključuje energetskej kompanije s najvećim tržišnim udjelom u svakoj promatranoj zemlji tijekom razdoblja 2006.-2015. Analiza omjera korištena je kako bi se poboljšalo razumijevanje njihove likvidnosti, profitabilnosti i rizika. Temeljem rezultata, u radu se raspravlja o položaju EU energetskej kompanija iz posttranzicijskej zemalja, kao i o mogućnostima njihove prilagodbe promijenjenim regulatornim i tržišnim uvjetima.

**Ključne riječi:** Financijskej uspješnost, Energija, Analiza omjera, Europska unija.

**Abstract:** Within the European Union's 2030 climate & energy framework, key targets for 2030 were set; to cut greenhouse gas emissions for at least 40%, to increase renewable energy for at least 32%, and to improve energy efficiency for at least 32.5%, all compared to 1990 levels. European Union strongly encourages energy efficiency and transition to renewable energy. This requires significant changes in the European energy industry; namely investing in low-carbon technologies while maintaining security of energy supply. Changes in the energy market affect the financial performance of energy companies.

The purpose of this paper is to evaluate the financial performance of energy companies in the European Union post-transitional countries; Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Republic of Croatia, Romania, Slovakia and Slovenia. Research includes energy companies with the largest market share in each country in the period 2006-2015. Ratio analysis was employed in order to increase the understanding of their liquidity, profitability, as well as risk. Based on the results, the paper discusses the position of the EU energy companies from post-transitional countries as well as their capabilities for adaptation to the changing regulatory and market conditions.

**Keywords:** Financial success, Energy, Ratio analysis, European Union.

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## 1. UVOD

Klimatski i energetska okvir do 2030. (EK, 2014) Europska je komisija usvojila u listopadu 2014. Njime je utvrđen okvir za provođenje klimatske i energetske politike Europske unije u razdoblju 2020.-2030. Ključni ciljevi u odnosu na razine iz 1990. uključuju smanjenje emisija stakleničkih plinova za minimalno 40%, povećanje udjela obnovljive energije za minimalno 32% te poboljšanje energetske učinkovitosti za minimalno 32,5%. Primjenom navedenog okvira do 2030. planira se omogućiti napredak prema niskougljičnog ekonomiji te formirati energetska sustav koji će omogućiti dostupnost energije svim potrošačima, povećati sigurnost opskrbe energijom, smanjiti ovisnost o njezinu uvozu, stvoriti prilike za rast, generirati nove poslove te donijeti nove ekološke i zdravstvene koristi (EK, 2014). Budućnost energetska sustava utvrđena je i u okviru Strategije energetska unije (EK, 2015), čime se potrošačima na području Europske unije želi osigurati sigurna, održiva, konkurentna i dostupna energija.

Smanjenjem emisija stakleničkih plinova želi se postići tranzicija prema niskougljičnoj, odnosno održivoj ekonomiji. Navedeno je u skladu s Pariškim sporazumom o klimatskim promjenama (UNCC, 2015) koji je stupio na snagu u 2016. godini. S ciljem ograničavanja globalnog rasta temperature na 1,5 °C do 2030. godine, u okviru Sporazuma poseban je naglasak stavljen na zemlje u razvoju koje imaju obvezu izvještavanja o emisijama stakleničkih plinova, dok razvijene zemlje imaju obvezu njihovog reduciranja. Istovremeno, niskougljična se ekonomija snažno oslanja na energetska učinkovitost.

U cilju postizanja energetska učinkovitosti Europska unija, između ostalog, promovira kogeneracijska postrojenja kako bi se poboljšala energetska učinkovitost u Europi. Takva postrojenja podrazumijevaju istovremenu proizvodnju električne i toplinske energije te mogu postići razine energetska učinkovitosti od približno 90% (EK, 2020). Istovremeno, povećanje udjela obnovljivih izvora energije za minimalno 32% ne može se dogoditi bez intervencija nacionalnih shema potpore za obnovljive izvore energije. Potencijalni je problem neadekvatna razina intervencije koja može poremetiti funkcioniranje energetska tržišta. Također, takve intervencije mogu imati negativan utjecaj na energetska kompanije koje imaju mali udio ili uopće nemaju udjela obnovljivih izvora energije u svom energetska miksu (Borožan i Pekanov Starčević, 2016). Uz promjene na energetska tržištu od visoko reguliranog prema liberaliziranom, energetska kompanije suočavaju se s izazovima, ali i rizicima poslovanja. U fokus dolazi njihova financijska uspješnost koja će u budućnosti odrediti mogućnosti njihova financiranja novih investicija.

Uvažavajući specifičnosti poslovanja u posttranzicijskim zemljama, namjera je ovoga rada steći uvid u poslovanje u takvim, za energetska kompanije, izazovnim uvjetima. Radom se analizira financijska uspješnost energetska kompanija iz posttranzicijskih zemalja Europske unije izračunom omjera likvidnosti, zaduženosti, profitabilnosti te omjera korištenja imovine tijekom desetogodišnjeg vremenskog razdoblja (2006.-2015.). Obzirom da se radi o specifičnom pristupu gdje se analizira uspješnost kompanija iz posttranzicijskih zemalja, koje imaju niz jedinstvenih karakteristika, s vladinim politikama i regulativom koja se može razlikovati u odnosu na razvijene zemlje, ovim se radom očekuje dati doprinos u tom području.

Rad je podijeljen u nekoliko poglavlja. Narednim poglavljem opisuju se izazovi s kojima se suočavaju energetska kompanije, uvažavajući specifičnosti posttranzicijskih zemalja. Slijedi poglavlje u kojemu se pojašnjava primijenjena metodologija rada. U okviru poglavlja s rezultatima provedenog istraživanja izračunati su najznačajniji omjeri te se temeljem rezultata analizira financijska uspješnost energetska kompanija iz posttranzicijskih zemalja EU, dok se završnim poglavljem zaključuje rad.

## 2. IZAZOVI POSLOVANJA ENERGETSKIH KOMPANIJA U POSTTRANZICIJSKIM ZEMLJAMA EUROPSKE UNIJE

Tranzicija od socijalističkog prema tržišnom gospodarstvu u većini se zemalja odvijala pod utjecajem Svjetske banke i Međunarodnog monetarnog fonda, a u okviru Washingtonskog sporazuma. Posttranzicijske zemlje Europske unije su u svojoj tranziciji pokušale imitirati karakteristike razvijenih ekonomija. Iako su u određenom dijelu rezultirajući društveno-ekonomski sustavi loše kopije zapadnoeuropskih sustava, zemlje koje su primljene u Europsku uniju formalno su postale dio “kluba” razvijenih zemalja (Podkaminer, 2013). Neka su istraživanja pokazala da je pristupanje Europskoj uniji ubrzalo godišnji rast BDP-a u zemljama Središnje i Istočne Europe za dodatnih 1,75% tijekom razdoblja 2000.-2008. (Böwer i Turini, 2010.). Međutim, financijska i ekonomska kriza koja se javila 2008. godine i prelila na posttranzicijske zemlje u 2009. godini pokazala je da je stanje prije krize bilo nerealno i neodrživo.

Financijska i ekonomska kriza, ali i snažno podupiranje energetske učinkovitosti u okviru ranije spomenutog Pariškog sporazuma i Klimatskog i energetskog okvira do 2030. dovela je do smanjenja potrošnje energije u Europi. Tablica 1 prikazuje bruto domaću potrošnju energije u posttranzicijskim zemljama Europske unije te EU-28.

**Tablica 1:** Bruto domaća potrošnja energije u posttranzicijskim zemljama EU  
(u milijunima tona ekvivalenta nafte)

	2005	2010	2015	2016	2017	Udio u EU-28, 2017. (%)
<b>EU-28</b>	1.836,5	1.768,2	1.638,7	1.648,9	1.674,9	100,0
<b>Bugarska</b>	20,1	17,9	18,6	18,3	18,9	1,1
<b>Češka</b>	45,5	45,6	42,3	41,9	43,4	2,6
<b>Estonija</b>	5,3	5,7	5,4	6,0	5,8	0,3
<b>Hrvatska</b>	9,8	9,5	8,5	8,6	8,9	0,5
<b>Latvija</b>	4,6	4,6	4,4	4,4	4,6	0,3
<b>Litva</b>	8,8	6,8	6,9	7,1	7,4	0,4
<b>Mađarska</b>	28,5	26,6	25,2	25,6	26,7	1,6
<b>Poljska</b>	92,6	101,6	95,7	100,5	105,1	6,3
<b>Rumunjska</b>	38,6	35,0	31,9	31,8	33,4	2,0
<b>Slovenija</b>	7,3	7,2	6,4	6,7	6,8	0,4
<b>Slovačka</b>	18,7	17,7	16,3	16,3	17,2	1,0
<b>Ukupno</b>						16,5

Izvor: Eurostat

Prema podacima iz Tablice 1, u 2005. godini bruto domaća potrošnja energije u EU-28 iznosila je 1.836,5 milijuna tona ekvivalenta nafte, u 2010. 1.768 tona, a u 2015. 1.638,7 tona. Tijekom 2016. godine došlo je do laganog oporavka potrošnje, ali ista u 2017. godini nije dosegla razine iz 2005. Ukoliko se promotri udio bruto domaće potrošnje energije u posttranzicijskim zemljama EU u ukupnoj potrošnji EU-28, on u 2017. godini iznosi tek 16,5%. Najveći udio u bruto domaćoj potrošnji energije ima Poljska sa 6,3% potrošnje EU-28, a najmanji Estonija i Latvija s tek 0,3%.

Promatrajući bruto domaću potrošnju energije u EU-28 u 2017. godini, nafta je i dalje najvažniji izvor energije europske ekonomije, a slijedi ju prirodni plin. Zanimljivo je da obnovljivi izvori energije konstantno rastu te su u 2017. godini nadmašili udio krutih fosilnih goriva kao izvora energije (Eurostat, 2019).

Sve navedeno ukazuje da se europsko energetska tržišta mijenja, zbog čega ulaganje u kapacitete za proizvodnju energije postaje rizičnije (Kiyak, 2012.). Stoga su energetske kompanije pred velikim izazovom u dijelu koji se tiče njihove financijske performanse, financiranja novih postrojenja te u konačnici održivosti poslovanja.

### 3. METODOLOGIJA RADA

Uzorak uključuje 11 energetska kompanija iz posttranzicijskih zemalja Europske unije s najvećim tržišnim udjelom u svakoj promatranoj zemlji. Promatra se desetogodišnje razdoblje (od 2006. do 2015. godine). Popis energetska kompanija dan je u Tablici 2.

**Tablica 2.** Energetske kompanije uključene u uzorak

R. br.	Država	Naziv energetske kompanije
1.	Bugarska	Kozloduy NPP Plc
2.	Češka	ČEZ Group
3.	Estonija	Eesti Energia
4.	Mađarska	MVM Magyar Villamos Művek Zrt.
5.	Latvija	Latvenergo
6.	Litva	Ignalinos atomine elektrine
7.	Poljska	PGE Polska Grupa energetyczna SA
8.	Hrvatska	Hrvatska elektroprivreda d.d.
9.	Rumunjska	Hidroelectrica
10.	Slovačka	Vodohospodarska Vystavba, s.p.
11.	Slovenija	HSE Holding Slovenske elektrarne

Iako se radi o posttranzicijskoj zemlji EU, energetska kompanija iz Litve, Ignalinos atomine elektrine isključena je iz uzorka obzirom da financijska izvješća za navedenu kompaniju nisu bila javno dostupna. Kako za kompaniju PGE Polska Grupa energetyczna SA financijska izvješća za 2006. godinu također nisu bila javno dostupna, analiza je za navedenu kompaniju rađena za vremensko razdoblje od 2007. do 2015. godine.

Izvor podataka za izračun financijskih omjera su javno dostupna financijska izvješća energetska kompanija iz posttranzicijskih zemalja EU. Analiza uključuje izračune sljedećih pokazatelja: pokazatelja likvidnosti, pokazatelja zaduženosti, pokazatelja korištenja imovine (pokazatelja aktivnosti) te u konačnici pokazatelja profitabilnosti. U okviru ovoga rada neće se analizirati pokazatelji ekonomičnosti i investiranja, ali navedena analiza može biti predmet istraživanja budućih radova.

Pokazatelji likvidnosti mjere sposobnost poduzeća za podmirenje kratkoročnih obveza. U ovom su radu računati koeficijent tekuće likvidnosti (omjer kratkotrajne imovine i kratkoročnih obveza), koeficijent ubrzane likvidnosti (omjer razlike kratkotrajne imovine i zaliha te kratkoročnih obveza) te koeficijent trenutne likvidnosti (omjer novca i kratkoročnih obveza). Što se tiče omjera zaduženosti, isti predstavljaju odraz strukture pasive te govore koliko je imovine financirano vlastitim, a koliko tuđim kapitalom (Žager i Žager, 1999).

Koeficijent zaduženosti predstavlja omjer ukupnih obveza i ukupne imovine, koeficijent financiranja predstavljen je omjerom ukupnih obveza i glavnice, dok je pokazatelj pokrića troškova kamata predstavljen omjerom dobiti prije poreza i kamata i samih kamata. Omjeri korištenja imovine, koji se nazivaju i omjerima aktivnosti pokazuju kolika je brzina obrtaja imovine u okviru poslovnog subjekta. Ciljem definiranja brzine korištenja imovine u okviru energetska kom-

panija iz uzorka, računati su koeficijent obrta ukupne imovine (omjer ukupnog prihoda i ukupne imovine), koeficijent obrta kratkotrajne imovine (omjer ukupnog prihoda i ukupne kratkotrajne imovine), koeficijent obrta potraživanja (omjer prihoda od prodaje i potraživanja) te trajanje naplate potraživanja (omjer broja dana u godini i koeficijenta obrta potraživanja). U konačnici, od omjera profitabilnosti računati su neto profitna marža (omjer neto dobiti i ukupnih prihoda), EBITDA (engl. *earnings before interest, taxes, depreciation, and amortization*, dobit prije kamata, poreza i amortizacije) marža (omjer EBITDA-e i ukupnih prihoda), povrat na imovinu (omjer neto dobiti i ukupne imovine) i povrat na kapital (omjer neto dobiti i vlastitog kapitala).

#### 4. REZULTATI

Tablica 3 daje pregled financijskih omjera: omjera likvidnosti, omjera zaduženosti, omjera korištenja imovine (omjera aktivnosti) i omjera profitabilnosti.

**Tablica 3.** Financijski omjeri energetskih kompanija posttranzicijskih zemalja EU

Grupe omjera	Omjer	Broj opažanja	Aritm. sredina	Stand. dev.	Min.	Max
<b>Omjeri likvidnosti</b>	Koeficijent tekuće likvidnosti	99	1,806	1,476	0,158	10,218
	Koeficijent ubrzane likvidnosti	99	1,540	1,327	0,116	9,386
	Koeficijent trenutne likvidnosti	99	0,628	0,988	0,004	6,457
<b>Omjeri zaduženosti</b>	Koeficijent zaduženosti	99	0,323	0,120	0,036	0,556
	Koeficijent financiranja	99	0,604	0,303	0,037	1,340
	Pokriće troškova kamata	93	11,464	20,964	-22,200	161,000
<b>Omjeri korištenja imovine</b>	Koeficijent obrta ukupne imovine	99	0,369	0,193	0,062	0,956
	Koeficijent obrta kratkotrajne imovine	99	2,819	1,382	1,079	7,231
	Koeficijent obrta potraživanja	99	8,248	3,664	3,218	21,372
	Trajanje naplate potraživanja	99	51,190	19,886	16,844	111,856
<b>Omjeri profitabilnosti</b>	Neto profitna marža	99	0,099	0,120	-0,392	0,564
	EBITDA marža	99	0,283	0,178	-0,297	0,999
	Povrat na imovinu	99	0,033	0,041	-0,215	0,146
	Povrat na kapital	99	0,055	0,080	-0,484	0,255

**Izvor:** Rezultati istraživanja

Prosječna vrijednost koeficijenta tekuće likvidnosti u okviru uzorka energetskih kompanija iz posttranzicijskih zemalja EU iznosi 1,806. Generalno se za vrijednost ovog omjera uzima minimalna vrijednost 2, što bi značilo da je vrijednost kratkotrajne imovine duplo veća od vrijednosti kratkoročnih obveza. Iako vrijednost koeficijenta nije u zadanim okvirima, dovoljno je blizu željene vrijednosti kako bi se moglo reći da energetske kompanije iz posttranzicijskih zemalja EU imaju zadovoljavajuću likvidnost. U ovom slučaju treba se osvrnuti i na vrijednost koeficijenta ubrzane likvidnosti koji bi trebao iznositi minimalno 1. Kod kompanija iz uzorka, njegova je prosječna vrijednost 1,54 te ukazuje da je najlikvidnija kratkotrajna imovina 1,54 puta veća od kratkoročnih obveza. Prosječna vrijednost koeficijenta trenutne likvidnosti iznosi 0,628. Obzirom da se radi o koeficijentu koji ukazuje na sposobnost poduzeća da novcem podmiri svoje kratkoročne obveze, njegova je vrijednost na nešto nižim razinama od prethodna dva pokazatelja likvidnosti.

Kako su energetske kompanije kapitalno intenzivne te zahtijevaju visoka ulaganja u postrojenja, takve velike investicije potrebno je financirati. Prosječna vrijednost koeficijenta zaduženosti iz uzorka, kao omjera ukupnih obveza i ukupne imovine, iznosi 0,323. Radi se o pokazatelju statičke zaduženosti čija se poželjna vrijednost kreće ispod vrijednosti od 0,5. Vrijednost od 0,323 upućuje na činjenicu da se energetske kompanije ne oslanjaju isključivo na dug kao način financiranja potrebne dugotrajne imovine. Koeficijent financiranja od 0,604 ukazuje na intenzitet korištenja financijske poluge, odnosno stupnja zaduživanja poduzeća. Energetske kompanije ne koriste intenzivno mogućnosti financijske poluge. Pokriće troškova kamata i njegova prosječna vrijednost od 11,464 ukazuju na više nego dovoljno dobiti prije kamata i poreza za pokriće troškova kamata.

Koeficijent obrta ukupne imovine bi generalno trebao iznositi više od 1. Ipak, navedeni se pokazatelj ne može promatrati jednoznačno te njegovu vrijednost treba staviti u kontekst konkretne industrije. Kod energetskih kompanija, njegova prosječna vrijednost u promatranom desetogodišnjem razdoblju iznosi niskih 0,369, što jasno ukazuje na visoku zastupljenost dugotrajne imovine u strukturi ukupne imovine energetskih kompanija. Prosječna vrijednost koeficijenta obrta kratkotrajne imovine iznosi 2,819, što ukazuje da se kratkotrajna imovina prosječno obrne gotovo 3 puta tijekom jednogodišnjeg razdoblja. Koeficijent obrta potraživanja ukazuje na brzinu obrta potraživanja ciljem stvaranja prihoda od prodaje te prosječno iznosi 8,248, dok je prosječno vrijeme naplate potraživanja 51 dan.

Promatrajući pokazatelje profitabilnosti energetskih kompanija, za očekivati je višu vrijednost neto profitne marže. Ipak, njezina je prosječna vrijednost u energetskim kompanijama posttranzicijskih zemalja EU tek 9,9% u promatranom desetogodišnjem razdoblju. S druge strane, EBITDA marža iznosi 28,3%, kao prosječna vrijednost u promatranom vremenskom okviru. Potrebno je napomenuti da je EBITDA marža pokazatelj koji ima visoke vrijednosti u kapitalno intenzivnim industrijama, kao što su primjerice naftna i plinska industrija, a u navedenu se kategoriju ubrajaju i energetske kompanije. Energetske kompanije također generiraju koristi zbog visokih početnih troškova potrebnih za ulazak u industriju. Prosječna vrijednost povrata na imovinu iznosi 3,33%, a prosječna vrijednost povrata na kapital 5,52%.

## 5. RASPRAVA I ZAKLJUČAK

Europsko se energetske tržište suočava s velikim izazovima, a rastuća liberalizacija tržišta dodatno ugrožava njihovo poslovanje namećući nove poslovne i financijske rizike. Navedeni su izazovi posebno naglašeni u posttranzicijskim zemljama EU, koje se suočavaju s dodatnim problemima u okviru svojih društveno-ekonomskih sustava. Stoga se operativna i financijska učinkovitost nameću kao nužnost u poslovanju kompanija u takvim zemljama.

Promatrajući financijske omjere kompanija iz uzorka, moguće je uočiti da energetske kompanije pokazuju zadovoljavajuće razine zaduženosti te iste ne bi trebale zapasti u financijske poteškoće niti imati problema prilikom servisiranja postojećih dugova. Promatrajući njihovu likvidnost, iako vrijednosti nisu u generalno zadanim okvirima, dovoljno su blizu kako bi se likvidnost mogla ocijeniti prihvatljivom. Omjeri korištenja imovine pokazuju nešto lošije vrijednosti, ali ih treba staviti u kontekst industrije. Kako se radi o kapitalno intenzivnim kompanijama, očekivane su niže vrijednosti obrtaja ukupne imovine. U konačnici, profitabilnost ovih kompanija nije na visokoj razini. Neto profitna marža iznosi 9,9%, iako je za očekivati višu razinu obzirom na



industriju. EBITDA marža, kako je i očekivano u kapitalno intenzivnim industrijama, pokazuje više vrijednosti.

U budućim istraživanjima poželjno bi bilo usporediti financijsku performansu energetskih kompanija posttranzicijskih zemalja EU s prosjekom EU, odnosno s pokazateljima energetskih kompanija razvijenih zemalja. Nadalje, u cilju uočavanja tendencija kretanja pojedinih pokazatelja tijekom vremena u energetskim kompanijama posttranzicijskih zemalja EU, uputno bi bilo uraditi analizu trenda u promatranom vremenskom okviru 2006.-2015. Navedeno može biti osnova za donošenje zaključaka o kretanju pokazatelja tijekom budućeg vremenskog razdoblja.

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# PROBLEMI S KOJIMA SE SUOČAVAJU ORGANIZACIJE PRI UPRAVLJANJU FLUKTUACIJOM ZAPOSLENIKA

## PROBLEMS THAT ORGANIZATIONS MEET IN THE MANAGEMENT OF EMPLOYEE TURNOVER

Ana Živković<sup>1</sup> 

DOI:

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**Sažetak:** Okrutnost tržišta radne snage nameće uvjete u kojima se individualne razlike sve više zatomljuju pa organizacijski aspekti više dolaze do izražaja kao važni uzročnici fluktuacije zaposlenika. Unatoč tome, nemoguće ih je preskočiti jer ono što motivira jednoga zaposlenika, u potpunosti suprotno može djelovati na drugoga zaposlenika pa je individualan pristup u upravljanju fluktuacijom neizbježan. To je puno lakše reći, nego napraviti, posebno u velikim organizacijama, no postojanje razvijene politike upravljanja ljudskim potencijalima može svesti stopu fluktuacije na minimalnu ili poželjnu razinu. Budući da je namjera fluktuiranja neposredni prethodnik same fluktuacije, organizacije trebaju istražiti čimbenike koji dovode do te namjere, a koji su mnogobrojni i raznovrsni, kao i ponašanja koja prethode fluktuaciji. Kako je fluktuacija multidimenzionalna pojava, ona se tako nikako ne smije promatrati van vremena i konteksta u kojem se pojavljuje, pa je nužno uzeti u obzir i vanjske čimbenike pri proučavanju mogućih odlazaka iz organizacije.

**Ključne riječi:** Organizacijsko ponašanje, Upravljanje ljudskim potencijalima.

**Abstract:** The cruelty on the labor market imposes conditions in which individual differences are increasingly dimmed, so organizational aspects are becoming more prominent as important causes of employee turnover. Nevertheless, it is impossible to skip individual differences because what motivates one employee can affect differently another employee, so an individual approach in managing employee turnover is inevitable. This is much easier said than done, especially in large organizations, but developed HRM policy can reduce the turnover rate to a minimum or desirable level. Because the turnover intention is an immediate antecedent to turnover behavior itself, organizations need to explore the factors that lead to that intention, which are many and varied, as well as the behaviors that precede actual turnover. As employee turnover is a multidimensional phenomenon, it must by no means be viewed outside the time and context in which it occurs, and it is, therefore, necessary to consider external factors when evaluating and predicting possible exits from the organization.

**Keywords:** Organizational behavior, Human resources management.

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### 1. UVOD

Od svih organizacijskih elemenata i organizacijskih čimbenika, čovjek je nakon desetljeća izučavanja organizacijskih problema, zaslužen zasjeo na tron istraživačkih pitanja kojima je cilj dati odgovore za usmjeravanje organizacija prema produktivnosti, profitabilnosti i kvaliteti cjelokupnog poslovanja. Premda je evidentan napredak u razvoju Menadžmenta ljudskih potencijala (eng. *Human Resource Management* – HRM), ova poslovna funkcija još uvijek nije dosegla potrebnu i opravdanu pažnju u poslovnome svijetu iako istraživači i znanstvenici neumorno naglašavaju potrebu i vrijednost fokusiranja na ljude i njihova ponašanja. Osnovna

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je zadaća Menadžmenta ljudskih potencijala pravilno odabrati, a kasnije oblikovati, motivirati i zadržati najbolje zaposlenike. Kolikogod regrutacija i selekcija zaposlenika bile detaljne, kvalitetno provedene te rezultirale odabirom najboljih kandidata, ne mogu jamčiti njihovu dugoročnu predanost i odanost organizaciji. Kao što je u marketinškom konceptu najteža zadaća stvoriti lojalnog potrošača, tako je u organizacijskom smislu najteže zadržati najbolje zaposlenike.

Fluktuacija predstavlja trajno napuštanje organizacije (Robbins, Judge, 2017), no ne mora nužno biti negativna pojava jer organizaciju mogu napustiti i „nepoželjni“, odnosno neproduktivni zaposlenici. Ako se zanemari prisilno povlačenje iz organizacije, pozitivna i negativna fluktuacija zaposlenika prirodna su pojava u organizaciji koju je potrebno svesti na minimalnu razinu. Svako trajno napuštanje organizacije stvara kvalitativne i kvantitativne troškove, od gubitka visokoproduktivnih kadrova, do troška ponovne selekcije i obuke. Visoka stopa fluktuacije može nanijeti ozbiljne štete produktivnosti cijele organizacije te organizacijskoj strukturi i kulturi pa je potencijalne odlaske iz organizacije, s naglaskom na dobrovoljnu negativnu fluktuaciju, potrebno predvidjeti na vrijeme.

## 2. TRENDVI U FLUKTUACIJI ZAPOSLENIKA

Tržišna dinamičnost i time uvjetovana fleksibilnost dovode do situacije u kojoj je zadaća zadržavanja zaposlenika u organizaciji postala iznimno teška, a s godinama će biti i teža. Na tržište rada dolaze nove generacije kojima su predanost i lojalnost organizaciji, a kamo li nečem većem, nepoznanice. Uzrok tome nisu samo generacijske razlike u biografskom kontekstu, već i kulturološke i gospodarske okolnosti u kojima današnja djeca odrastaju promatrajući svoje roditelje kako preko noći ostaju bez svojih radnih mjesta. Stoga ni ne čudi da se današnja mladež u sve većem postotku odlučuje na daljnje i duže školovanje kako bi se što kasnije mogli/morali suočiti s tržištem rada. Ta ista mladež kada se zaposli, ne percipira radno mjesto i posao na jednak način kako su to činili nekada njihovi roditelji, a pogotovo bake i djedovi.

Na tržište rada rapidno su već prodrli Milenijalci, odnosno Y generacija, koja se drugačije ponaša nego sve prijašnje generacije, a očekivanja od radnoga mjesta i organizacije, puno su im veća nego kod ijedne prijašnje generacije (Tolbize, 2008). Prisutna i nadolazeća „digitalna generacija“ od organizacije očekuje poslovnu slobodu, fleksibilnost i ravnotežu između privatnog i poslovnog života, a ako im visoki zahtjevi nisu zadovoljeni, napustit će organizaciju puno prije i radikalnije nego što bi to učinile prethodne generacije. I ne samo to, oni svoju poželjnu poslovnu budućnost vide kroz izmjenjivanje nekoliko različitih organizacija, pa će zadržavanje ove generacije u organizacijama biti veći izazov nego što je to bio slučaj i sa jednom prijašnjom generacijom. Otprilike 25% zaposlenika željelo bi promijeniti svoju trenutnu organizaciju u iduće tri godine (Kjeldstad, Dommermuth, 2009, preko Paulsen, 2014), a pretpostavlja se da se taj postotak s godinama samo povećava. Gallup je u svom istraživanju 2015. godine utvrdio kako 51% zaposlenika razmišlja o novim radnim mjestima (Mann, Mccarville, 2015).

Mnoge organizacije već su danas većinom „sastavljene“ od Milenijalaca, a oni očekuju mijenjanje radne organizacije svakih nekoliko mjeseci, eventualno godina (Lee i dr., 2017). Fluktuacija je varijabla koja konceptualno povezuje iskustva pojedinaca u organizacijama s kritičnim mjerama uspjeha tih organizacija, a prema podacima Eurostata, zaposlenici Europske Unije duplo su više skloni mijenjanju radnih mjesta u odnosu na američke zaposlenike (Holtom i dr., 2008). To se donekle može objasniti većim stopama nezaposlenosti, ali i razlikama u nacionalnim i organizacijskim kulturama.

Kao i svaki drugi oblik organizacijskog ponašanja, fluktuacija je podložna različitim utjecajima počevši od onih na individualnoj razini, grupnoj, te na razini čitavog organizacijskog sustava. Pri tome je potrebno obuhvatiti sve okolinske i situacijske čimbenike koji uvelike oblikuju ponašanje zaposlenika. Pretpostavlja se, stoga, da su gospodarska situacija neke zemlje te stanje na tržištu rada, jedni od važnijih čimbenika pri donošenju odluke o potencijalnom napuštanju organizacije. Što su društvo i tržište rada konkurentniji, veće će mogućnosti izbora rezultirati većim stopama fluktuacije. Jednako tako, na individualnoj razini postoji niz čimbenika kojima je teško upravljati, od biografskih karakteristika, osobnosti, sposobnosti, vrijednosti i stavova pa do percepcije koju je najteže oblikovati i mijenjati. Unatoč tome, na organizacijskoj razini prostor za manevriranje je ogroman pa je moguće usmjeravati organizacijsko ponašanje u željenom smjeru.

### 3. UPRAVLJANJE FLUKTUACIJOM

Zapošljavanje je jedan od ključnih koraka u zadržavanju zaposlenika u organizaciji. Previše ljudi traži poslove koji nisu usklađeni s njihovim obrazovanjem, iskustvom, kompetencijama i ponašanjem, a poslodavci nisu voljni ili nisu u mogućnosti odrediti koji kandidati valjano odgovaraju ponuđenim radnim mjestima (Moreland, 2013). McNally tvrdi da se visoke stope apsentizma, a i fluktuacije mogu izbjeći kroz kreiranje realističnog pregleda poslova. To podrazumijeva kvalitetno oblikovanje radnoga mjesta, odnosno definiranje prirode posla, koje zahtjeva detaljnu i preciznu analizu potreba radnoga mjesta u okviru opisa posla te potrebnih kvalifikacija kroz specifikaciju radnih mjesta. Sve pojedinosti o radnome mjestu (naknade, beneficije, radni uvjeti, menadžerski stil, izazovi i svi zahtjevi) unaprijed moraju biti jasno definirane kao i očekivanja od zaposlenika, barem usmeno i neformalno, ako već ne postoji službeni dokument kojim bi se takve informacije prenijele. Budući da očekivanja imaju izrazit utjecaj na osjećaje, stavove i namjere, važno je ispitati i očekivanja zaposlenika od radnoga mjesta i organizacije. Holtom (2008) naglašava kako je vrijeme bitna odrednica praćenja očekivanja pa savjetuje ispitivanja očekivanja pri ulasku u organizaciju te ispitivanje očekivanja od organizacije u budućnosti već uhodanih zaposlenika uz obrazloženje da buduća očekivanja određuju sadašnja i buduća ponašanja.

Neke se sklonosti fluktuaciji mogu otkriti baš pri procesu regrutacije i selekcije novih zaposlenika. Na primjer, samopouzdanje i odlučnost (u kombinaciji s vezom koju je pojedinac ostvario s prethodnim poslodavcima) negativno su povezani s fluktuacijom, kao i stupanj savjesnosti koji pojedinac posjeduje (Barrick, Zimmerman, 2005), a te se karakteristike, kao i mnoge druge, jednostavno mogu ispitati kod radnih kandidata. Obično kandidati koji pokazuju manju afektivnost, koji su više skloni riziku, a osobnost im je impulzivnija, prije će se odlučiti na napuštanje organizacije. Postoje različiti testovi koji ispituju osobnost pojedinca, i u mnogim slučajevima ga svrstavaju u neku kategoriju ili tip ličnosti. Tako postoje i testovi koji prediktivno mjere stupanj mogućeg napuštanja organizacije s obzirom na osobnost, no pitanje je koliko su oni pouzdani i je li u trenutku zapošljavanja novoga zaposlenika, samo ispitivanje njegove namjere fluktuacije važnije od, primjerice, njegove potencijalne produktivnosti.

Ako proces zapošljavanja može izravno ili neizravno utjecati na namjeru fluktuacije, organizacije mogu, ne samo smanjiti fluktuaciju odabirom zaposlenika koji ne planiraju jasno napuštanje organizacije, nego mogu i reducirati namjere kroz proces zapošljavanja zbog čega je potrebna veća integracija procesa zapošljavanja i istraživanja fluktuacije (Holtom i dr., 2008). Barrick i Zimmerman (2005) svojom su studijom utvrdili da se kod radnih kandidata i ulaznih zaposlenika namjera fluktuacije pokazuje lošijim prediktorom od raspoloživih biopodataka (dob, spol,

iskustvo, osobnost i slično), jer kandidati koji tek ulaze u organizaciju, za razliku od „starosjedioca“, imaju manje informacija o organizaciji i poslu te ne mogu valjano kreirati svoje stavove i namjere. Također, malo je vjerojatno da će se u selekcijskom postupku kandidat izjasniti kako ima namjeru napustiti organizaciju kojoj se tek namjerava pridružiti.

Jasno je da je potencijalnim zaposlenicima cilj predstaviti se u pozitivnom svjetlu pri procesu selekcije, pa isto tako, i organizacija bi trebala težiti pozitivnom, a prvenstveno realnom svjetlu, kojim će se predstaviti kako bi bila učinkovita i dosljedna. McNally također smatra kako je ključ organizacijske predanosti koja je preduvjet zadovoljstva poslom te namjere ostanka u organizaciji emocionalna povezanost koju je potrebno razviti kroz povjerenje, posebno prema nadređenima. Ona kaže da je namjera davanja zaposlenicima, a ne uzimanja od njih, nadogradnja za jasna očekivanja što onda rezultira i većom organizacijskom uključenošću. Zbog toga Holtom i suradnici (2008) naglašavaju kako je u znanosti potrebno unaprjeđivati modele fluktuacije koji će snažno uzimati u obzir društvenu, odnosno socijalnu komponentu, u svrhu mjerenja međuljudske povezanosti. Tajna uz to leži i u generiranju entuzijazma i uzbuđenja za ispunjenje same svrhe organizacije te, u konačnici, kroz pravednost u nagrađivanju, ali i ostalim aspektima poslovanja. Iako je upravljanje fluktuacijom kompleksan proces koji zahtjeva uključenost stručnjaka različitih disciplina, McNally savjetuje „održavanje svečane i zanimljive atmosfere u kojoj zaposlenici žele svaki dan dolaziti na posao... jer je ključ zabaviti se, a to ne košta ništa“.

Pri zapošljavanju novih zaposlenika, mogući su interni i eksterni izvori, pri čemu i jedni i drugi posjeduju različite prednosti i nedostatke. U kontekstu upravljanja karijerom zaposlenika, odabir izvora regrutiranja može biti ključan i kod same fluktuacije. U slučajevima internih izvora zapošljavanja, zabilježene su manje stope organizacijske fluktuacije (Haines, 2010) pa jedina mobilnost poželjnih kadrova u tom slučaju jest interna mobilnost što ujedno i izgrađuje korporacijsku kulturu. U organizacijama koje primjenjuju ovu praksu vidljive su otvorene mogućnosti napredovanja što zaposlenicima daje ohrabrenje za povećanje vlastitoga truda i produktivnosti koje organizacija pravovremeno prepoznaje i nagrađuje zbog čega izostaje namjera za napuštanjem organizacije.

Dobar radni kandidat i dalje nije jamac dugoročno uspješnoga zaposlenika jer je izgradnja kvalitetnog odnosa sa zaposlenikom kontinuirani proces uspostavljanja lojalnosti, odnosno organizacijske predanosti. Motivacija zaposlenika, kao okosnica upravljanja ljudskim potencijalima, glavni je alat za eliminiranje disfunkcionalne fluktuacije jer nedostatak adekvatne motivacije dovodi do nedostatka jasno postavljenih ciljeva pa onda i problema s ispunjenjem istih, kao i nepoželjne razine produktivnosti, pri čemu nije ni moguće očekivati od zaposlenika da ostanu u organizaciji (Vnoučková, Klupáková, 2013). Zahtjevi radnih mjesta u kombinaciji s ograničenim resursima mogu potaknuti izgaranje/iscrpljenost (suprotno od angažiranosti zaposlenika) i direktno izazvati namjeru fluktuiranja pa je veza između angažiranosti zaposlenika, izgaranja/iscrpljenosti i namjere napuštanja organizacije nebrojeno puta dokazana (Schaufeli, Bakker, 2004). Glavni razlog zbog kojeg ljudi napuštaju svoj posao jest njima loš i neodgovarajući posao: kada su zaposlenici na položajima koji ne odgovaraju njihovim vještinama ili interesima ili ne dobivaju odgovarajuću obuku kako bi zadovoljili zahtjeve svog radnog mjesta, vrlo je teško od njih stvoriti produktivne, zadovoljne, predane i angažirane zaposlenike (Moreland, 2013).

Nakon što radni kandidat postane punopravni zaposlenik organizacije, kreće možda najteže razdoblje za menadžment u upravljanju fluktuacijom. Razlog je više nego jednostavan, a taj je da, kako je ranije dokazano, prvi period u organizacijskoj karijeri najosjetljiviji je te u njemu

najviše zaposlenika napušta organizaciju. Društvo za upravljanje ljudskim resursima (eng. *Society for Human Resource Management* – SHRM) ustanovilo je kako će 69% zaposlenika ostati u organizaciji sigurno tri godine ako iskuse dobar proces „usidrenja“, a u organizacijama u kojima je taj proces ulaska strukturiran, produktivnost zaposlenika veća je za čak 50% (Hirsch, 2017). To znači da uvođenje novoga zaposlenika u organizaciju ne treba biti prepušteno slučaju jer je stjecanje iskustva, znanja, upoznatosti s pravilima i procedurama, kao i društveno povezivanje i uključivanje u organizacijsku kulturu, zadaća same organizacije.

Podrazumijeva se da osobne karakteristike bitno utječu na fluktuaciju (dob, radno iskustvo, nacionalnost, kvalifikacije, rod/spol, kulturno nasljeđe, obiteljske karakteristike i tako dalje) pa ono što će potaknuti zaposlenika na napuštanje organizacije može biti intrinzične prirode čime se teško može na organizacijskoj razini upravljati. Jenkins (2009) tako navodi kao uzročnika fluktuacije disharmoniju intrinzične motivacije. Uostalom, osobnost može igrati važnu ulogu, no i ona je podložna utjecajima različitih motivacijskih tehnika, što znači da ju djelomično mogu oblikovati i drugi ljudi (Niermeyer, Seyffert, 2007 preko Vnoučková, Klupáková, 2013).

Razlozi fluktuacije razlikuju se od organizacije do organizacije, a te su razlike uočljivije među različitim zemljama, odnosno gospodarstvima, kao i različitim industrijskim granama (Peretz, Fried, 2012). Stres se u nekim istraživanjima navodi kao izuzetno važna varijabla koja utječe na namjeru napuštanja organizacije (Bashir, Durrani, 2014; Yang i dr., 2015), što može biti posljedica dvosmislenosti radnih zadataka i uloga, sukoba uloga, preopterećenosti poslom, sukoba između posla i obitelji (Hang-Yue i dr., 2005) i organizacijske kulture (Paulsen, 2014) s malo prostora za napredovanje u karijeri i autonomiju te s monotonim radnim mjestima (Budhwar i dr., 2009).

Jake organizacijske kulture u kojima su temeljne vrijednosti jače i šire prihvaćene, izravnije su povezane sa smanjenom fluktuacijom, nego slabe organizacijske kulture jer one nemaju dovoljan utjecaj na ponašanje svojih članova (Robbins, Judge, 2010). U jakim kulturama postoji „suglasnost među članovima o značenju organizacije... koja gradi koheziju, lojalnost i predanost organizaciji“ (Robbins, Judge, 2010: p. 576). Zaposlenikova percepcija organizacijske kulture stoga može potaknuti ključne medijatorske varijable, koje mogu dovesti do odluke o odlasku ili ostanku u organizaciji (Schaufeli, Bakker, 2004). Neovisno o jačini organizacijske kulture, za zaposlenike čije se pojedinačne vrijednosti ne podudaraju s vrijednostima organizacije, vjerojatnije je da će napustiti organizaciju nakon 20 mjeseci rada u organizaciji (O’Reilly i dr., 1989).

#### 4. IMPLIKACIJE RADA

Upravljanje fluktuacijom nije samo problem koji se nameće menadžerima i vlasnicima organizacija, već i političarima jer se pretpostavlja da veće razine fluktuacije na tržištu rada donose lošiju radnu performansu. Depresija se s makro razine prenosi na mikro razinu pa nepovoljna gospodarska klima utječe i na atmosferu koja vlada u organizacijama. Dinamiku odnosa između fluktuacije i radne performanse potrebno je pratiti i na mikro i na makro razini pri čemu predikcije ne smiju biti trivijalne.

Jedna od opcija jest svakako mjerenje takozvanog „*stayer score-a*“ do kojeg se dolazi razlikom postotka između zaposlenika koji entuzijastično žele ostati u organizaciji (ES zaposlenici) i onih koji ostaju protiv svoje volje (RS zaposlenici) (sukladno Proximal Withdrawal States Theory (PWST)). Iako je teško u tim slučajevima postići nepristranost i iskrenost, potrebno je zaposlenicima objasniti važnost takvog ispitivanja u svrhu podizanja ukupne radne performan-

se. Većina istraživača, pa onda i konzultanata u praksi primjenjuje sljedeći prediktivni dizajn: mjere uzročnike fluktuacije (npr. zadovoljstvo poslom) anketiranjem upitnicima ili evidencijom i izvještajima zaposlenika; prate zaposlenike od 6 mjeseci do 2 godine; identificiraju osobe koje žele ostati i one koje namjerno žele otići te zatim statistički procjenjuju prediktore za napuštanje organizacije, pri čemu se dobrovoljnost napuštanja procjenjuje od strane poslodavaca nakon što zaposlenici napuste organizaciju, a ne od njih samih (Hom i dr., 2012). To je skup i dugotrajan proces, a pouzdanost može biti upitna. S druge strane, nezgodno je i nezahvalno ispitivati zaposlenike koji su evidentno pri napuštanju organizacije ili su je već napustili. Oni koji su „jednom nogom vani“, neće se usuditi biti nepristrani zbog očekivanja eventualne pozitivne preporuke za buduće radno mjesto, dok će oni koji su već napustili organizaciju, malo vjerojatno uopće željeti sudjelovati u nekom istraživanju vezanom za bivšu organizaciju pri čemu bi i njihova objektivnost bila upitna.

## 5. ZAKLJUČAK

Iako je fluktuacija individualni izbor ponašanja (Paulsen, 2014), 80% fluktuacija ipak je unutar kontrole poslodavaca (Insync Surveys, 2012) što daje prednost utjecaju unutarnjih organizacijskih čimbenika u usporedbi s vanjskim čimbenicima. Jedan od najčešćih internih razloga svakako je (ne)zadovoljstvo poslom. Većina zaposlenika koja napušta radno mjesto kao glavni uzrok navodi nezadovoljstvo poslom, preciznije, nezadovoljstvo lošom komunikacijom koja se temelji uglavnom na „top-down“ sustavu, lošim odnosima s radnim kolegama, te nedostatku povjerenja (Buzeti i dr., 2016). Osim zadovoljstva poslom i vodstva, apsentizam također može biti prediktor namjere fluktuacije (Paulsen, 2014.).

Svakim se ponašanjem zaposlenika organizacija bavi u okviru menadžmenta ljudskih potencijala, no organizacija sa zasebnim odjelom menadžmenta ljudskih potencijala i nema mnogo. U zemljama u kojima prevladavaju male i srednje organizacije, rijetko se usredotočuje na spomenutu poslovnu funkciju, a nedostaju i mogućnosti i sredstava za eksternalizaciju iste. Čak i velike organizacije otežano barataju stručnim znanjima iz područja organizacijskog ponašanja jer fokus na produktivnost te motiviranje produktivnosti ne ostavlja puno prostora za predviđanje budućih ponašanja zaposlenika. Povremeni naponi na području ljudskih potencijala ne mogu polučiti značajnije spoznaje o (ne)zadovoljstvu zaposlenika ili fluktuaciji, a pogotovo o međusobnom utjecaju organizacijskih varijabli i ponašanja. Posve je razumljivo da su vrijeme i novac ograničavajući čimbenici, no dok je subjektivne varijable skuplje, duže i teže pratiti, pokazatelji apsentizma primjerice mogu biti brzi i efikasni indikatori eventualnih poteškoća, a samim time i prediktori budućih ponašanja.

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# RETORIKA KAO VEŠTINA LIČNOG PREZENTOVANJA

## RHETORIC AS A SKILL OF PERSONAL PRESENTATION

Slobodan Petrović<sup>1</sup>

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**Apstrakt:** *Retorika kao veština koja odlikuje intelektualce od nastanka sveta jedino je i oružje i oruđe koje čovek putem izgovorene reči može da koristi kako bi sebe ili odbranio ili prezentovao. Ova drevna veština predstavljala je, a i danas predstavlja vrlinu odabranih, ukras umnih, filozofsku dubinu, misaonu širinu i esenciju izgovorene reči. Pretvoriti misli u jednostavne i širokom auditorijumu umno razumljive reči, svakako je sposobnost veštih govornika, koji kao cilj i motiv imaju isključivo lično prezentovanje i profesionalno profilisanje, kroz niz manipulativnih, retorički spretno izgovorenih, misaono i praktično opravdanih teza koje se teško ili lako opovrgavaju, što determiniše govornika kao dobrog ili lošeg. Suština je da je retorika način ličnog prezentovanja sopstvene ličnosti, kroz koju individua ispoljava sopstveni ili stav lica koje ju je angažovalo, a da pri tom uspe svojim govorom da zaintrigira i uslovno rečeno povede auditorijum. Kroz istoriju civilizacije ova drevna, možda i najstarija veština imala je svoje promotere, to su bili najveći umovi sveta, svetske religijske istorije, filozofske tradicije, kulturološke tekovine, političke borbe, pohlepe velikana i odbrane lagodnosti monarhističkih predstavnika. Sve do današnjih dana ova tehnika izgovorene reči predstavlja izazov koji se vežba, sa kojim se čovek ne mora roditi, ukoliko je dovoljno uporan da savlada sve tajne dobrog javnog nastupa, sposobnost percepcije sebe, cilja, alata i rezultata koji se ostvaruje efektom izgovorene reči.*

**Ključne reči:** *Retorika, Javni nastup, Prezentovanje, Tehnika govora, Veština, Umetnički izraz.*

**Abstract:** *Rhetoric as a skill that distinguishes intellectuals from the beginning of the world is the only weapon and a tool that a person can use through a spoken word to either defend or present himself. This ancient skill represented, and still represents, the virtue of the chosen ones, the ornament of the intelligent, the philosophical depth, the breadth of thought and the essence of the spoken word. To turn thoughts into simple and intelligent words that can be understood by a wide audience is certainly the ability of skilled speakers, who have as their goal and motive personal presentation exclusively and professional profiling, through manipulative, rhetorically skilfully spoken, mentally and practically justified theses that are difficult or easy to refute, which determines the speaker as good or bad. The essence is that rhetoric is a way of personal presentation of one's own personality, through which an individual expresses his own or the attitude of the person who hired him, and at the same time manages to intrigue with his speech and conditionally lead the audience. Throughout the history of civilization, this ancient, perhaps the oldest skill has had its promoters, they were the greatest minds of the world, world religious history, philosophical traditions, cultural heritage, political struggles, greed of the greats and defense of the comforts of monarchist representatives. To this day, this technique of a spoken word represent a challenge that is practiced, with which a person does not have to be born, if he is persistent enough to master all the secrets of good public appearance, the ability to perceive himself, goal, tools and results achieved by the effect of the spoken word.*

**Keywords:** *Rhetoric, Public Speaking, Presentation, Speech technique, Skill, Artistic expression.*

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## 1. UVOD

Svrha i potreba izučavanja retorike kao veštine koja nam omogućava da ispoljimo svoju unutrašnjost, metafizički deo ličnosti, zasniva se na samoidentifikaciji i prezentovanju. Čovek se prvo prezentuje sam sebi, to je auto sublimacija. Mi prvo prihvatamo sebe, a tek potom smo u mogućnosti da prenesemo drugima deo svoje unutrašnje, misaone strane bića. Ili, pak, ne prihvatimo sebe, što je tema psihološkog istraživanja. U procesu prihvatanja otelotvorenog Id-a ljudi stiču samouverenje i sposobnost za lično perceptovanje, a to je nužno prilikom iznošenja stavova, argumenata, kontraargumenata, odbrane ili retoričkog napada. U svim navedenim, kao i u mnogim drugim sličnim situacijama, čoveka indentifikuje i čini imenicom, a ne brojem način na koji iznosi odnosno kolektivno oživljava svoje misli, a to je retorika. Retorika je osnova razumevanja sebe, te je ona isto onoliko sociološka koliko je i psihološka, ali i filozofska disciplina, posmatrana sa aspekta metoda i osnova na kojima počiva. Govornik postaje svestan snage svojih misli onog trenu kada ih izgovori, odnosno kada vlastite misli kanališe kroz reči auditorijumu.

U antičkoj Grčkoj ili Rimskom carstvu izgovorena reč uticala je samo na auditorijum, odnosno na slušaoce, koji su čuli, razumeli i shvatili poruku misli koje su iskazane. Dok 21. vek sa svim medijima koji su dostupni omogućava govorniku da bude viđen, da njegov govor čuje i misaono apsorbuje cela kugla zemaljska. Putujući kroz vreme menjali su se samo načini prenošenja informacije, ali ono što ovaj rad kvalifikuje naučnim istraživačkim radom jeste upravo činjenica da je suština govora kroz vreme ostala na govorniku. Na onome ko rečima vlada. U tom smislu retorika je od ustanovljavanja, od prihvatanja kao veštine, postala i ostala jedini manir iznošenja misli, u trenutku, emotivno, ali i racionalno, ona jeste jedinstven način prezentovanja individualnosti. S toga se bez osporavanja može konstatovati da je retorika veština ličnog prezentovanja.

## 2. SKLOP UNUTRAŠNJIH ČINILACA KOJI OBRAZUJU LIČNOST

Identitet jednog bića determinišu tri faktora: genetski, socijalni i pedagoški. Genetski činilac determinante ličnosti predstavlja sveukupan genetski materijal koji biće dobija rođenjem, socijalni faktor su dominantni oblici ponašanja jedinke u procesu odrastanja, od ranog detinjstva, pa sve do formirane ličnosti, te na posletku pedagoški faktor koji je jednako zastupljen kao i prethodna dva pomenuta, on počinje da ostvaruje interakciju sa jedinkom u procesu obrazovanja, sve u zavisnosti od kad do kad taj proces traje, kao i način na koji se obrazovanje sprovodi. Međutim, istorija retorike kao veštine govori da su najveći govornici sveta to zapravo postajali, a ne da su se kao takvi rađali. Često se za primer uzima Demosten, koji je imao govornu manu. Da bi je savladao, on je svoju dugu kosu šišao tako što bi ošišao samo jednu polovinu kose na samo jednoj strani, a onda je do beskonačnosti vežbao govor i zapravo vežbanjem gradio svoju besedničku ličnost. Ovakva istorijska činjenica demantuje tvrdnju da su u formiranju ličnih kvalifikacija bitni genetski, socijalni i pedagoški faktor. Praksa govori da i situacija, kao i motivacija, kao i stečene ili urođene osobine grade stil govornika, koji često postaje prepoznatljiv, dominantan, pa vremenom i deo identiteta ličnosti. U ovom smislu najbolji primer su politički govornici, jer ih istorija, a u novije vreme i video snimci najbolje opisuju. Pojedini govornici su stekli govornički identitet upravo jer nisu želeli da poput Demostena vežbaju i prevaziđu svoju govornu manu, već su govornu manu upotrebljavali kao sastavni deo svog natalnog govora, te na taj način i postali široj masi poznati, što je svakako doprinelo njihovoj besedničkoj afirmaciji na području govorništva.

### 3. VEŠTINA UBEĐIVANJA KAO ORUĐE I ORUŽJE U RETORICI

Ubeđivanje podrazumeva motivisanje auditorijuma i uveravanje auditorijuma da je neophodno sprovesti baš onu akciju koja je predmet, a i cilj procesa ubeđivanja. Ubedljive osobe su one osobe koje uspevaju da ideje pretvore u akcije. Smatra se da ubeđivanje nije sredstvo manipulacije. Mada, to se može potvrditi tek onda kada se jasno utvrdi cilj koji se procesom ubeđivanja želi postići. Teoretičari retorike i psiholozi se slažu da je „U svakoj situaciji potrebna moć ubeđivanja da bismo dobili rezultat kakav želimo.“ Iz tog razloga možemo konstatovati da je ubeđivanje spoj umetnosti i nauke. Da bi individua stekla sposobnost ubeđivanja nužno je da savlada pojedine veštine, ali i određene manifestne karakteristike ličnosti: izgradnja kredibiliteta u društvu, retoričko inficiranje publike na racionalnom i na emotivnom planu, uspostavljanje kvalitetne veze između onoga što se izgovara i misli auditorijuma tzv. prevazilazak otpora prema besednikovim idejama i sl.

Retoričar može smatrati da je na pola puta do uspeha onda kada uspe korišćenjem vlastite elokvencije i jezičkog uticaja, da ubedi i pridobije misli auditorijuma. Njegovo viđenje jednog procesa ili pojave treba da postane viđenje okupljene mase, tek onda postoji mogućnost da će se reči i ideje pretočiti u dela. Zapravo kroz proces ubeđivanja retoričar menja, jača ili izgrađuje mišljenje i stavove auditorijuma.

Sam proces ubeđivanja nije puko teorijsko prezentovanje, već ono podrazumeva i pozicioniranje ideje, pristupa ili rešenja koje se objektivno najviše dopada auditorijumu i predstavlja najrealniju moguću opciju koja će pokrenuti ljude na fizičku akciju. Dakle, ubeđivanje je psihički proces dejstva misli unutar individue koji proizvodi povratnu reakciju. Ubeđivanje ima neograničenu mogućnost primene: lobiranje, prodaja, politički govori, ratni govori, nacistički govori, posmrtni govori i dr. Ključni elementi ubeđivanja su: kredibilitet, zajedničko tle (razumevanje područja i kulture na kome se govornik nalazi), pomoćne informacije (proverene i dokazane činjenice na koje se govornik u svakom trenutku može osloniti, koje mu garantuju verodostojnost u procesu ubeđivanja), duboko razumevanje emocija (retoričar mora da prati reakciju publike, te shodno reakciji da usklađuje tonalitet, način naglašavanja, način kretanja, smer pogleda, intenzitet iznošenja podataka).

Ubeđivanje kao proces ovladavanja mislima i delima auditorijuma nužno je da ima etički kodeks ponašanja koji je u skladu sa moralnim i pravnim normama. Edvard R. Marou je rekao: „Da bismo bili ubedljivi, moramo da budemo uverljivi; da bismo bili uverljivi, moramo da budemo pouzdani; da bismo bili pouzdani, moramo da budemo istinoljubivi“.

### 4. DETERMINISANJE SEBE U ODNOSU NA RETORIČKE AKTIVNOSTI

Najvažniji korak u procesu upravljanja retoričkim nastupom jeste samospoznaja. Upoznati sebe podrazumeva da možete bez teškoća prepoznati sve svoje mane, ali i vrline, znati u kojim segmentima ste slabi, a u kojim snažni, odnosno biti spreman u svakom trenutku dati odgovor, a ukoliko odgovor ne postoji iz opravdanih ili manje opravdanih razloga, izgovoriti retoričko pitanje umesto odgovora što će skrenuti pažnju sa postavljenog pitanja do te mere da će osoba iz auditorijuma i zaboraviti (trenutno) šta je želela da čuje.

Kako najbolje upoznati sebe? Jedan od načina objektivne samospoznaje jeste mišljenje drugih ljudi o vama, s tim da to mišljenje mora biti objektivno. Tuđe oči najbolje mogu da spoznaju vrednosti, interesovanja, sposobnosti, stepen emotivnosti, snagu motivisanosti, kao i druge relevantne odlike ličnosti koje su značajne za postupak determinisanja sebe u odnosu na

retoričke sposobnosti. Neke od mogućih metoda jesu: konsultovanje svojih kolega, razgovor sa prijateljima, čak u zapadnoj praksi dominantan je i tzv. „Odgovor putem anonimnog pisma“. Međutim, postoji još jedan bitan aspekt u procesu samospoznaje koji može pomoći da otkrijemo motivacione regulatore unutar analizirane ličnosti, a to je prepoznavanje trenutka kada je vreme da istražimo neke nove poslovne sposobnosti koje će nas motivisati da damo svoj maksimum.

Sklop psiholoških elemenata ličnosti ispoljava se kroz govor čovekovog tela, tako retorika doživljava uspon ili pad, odnosno u zavisnosti od naših unutrašnjih predstava o predmetu izlaganja nesvesno čovek reaguje pokretima tela, a ti pokreti, podrazumeva se nisu kontrolisani. Čovek treba da determiniše sebe i sopstvene potencijale u odnosu na realnu sliku motiva koji ga pokreće. Želimo ono za čim se u nauci uopšte teži, to jest razumevanje pojava, stvaranje veza među njima i na kraju krajeva, gde je to moguće, proširenje svoje moći nad njima (Frojd, 2017). Definisane personalne veštine govorničtva početak je postizanja uspeha, uzimajući u obzir sve unutrašnje segmente ličnosti.

## 5. IZGOVORENE MISLI KAO ODREĐENJE RETORIČARA

Pošto ljudi upotrebljavaju reči kao znakove svojih ideja, možemo se najpre upitati kako su reči određene za to; svi se slažu da to nije usled izvesne prirodne veze između nekih artikulisanih zvukova i pojedinih ideja (jer bi onda u ljudskom svetu postojao samo jedan jezik), već na osnovu jedne proizvoljne postavke, kojom je data reč hotimično odabrana kao znak takve ideje (Vilhelm Lajbnic, 2010). Retoričar određuje sebe rečima (mislima) koje izgovori, zapravo to ne mora nužno biti tako, jer čovek ne mora uvek da govori ono što misli, ali svakako da će njegovo usmeno izlaganje imati primese misaonih akcija koje se unutar njega odvijaju, te će i u tom smislu biti determinisan kao i sopstvene misli. Na sprovedenom eksperimentu u slušaonici sa studentima, svi studenti u slušaonici dok čute oni su jednoobrazni, tek onog trenutka kad ispolje svoje misli, oni izražavaju sopstveni identitet i tog trena oni postaju imanica, a prestaju biti broj. Isti je slučaj i sa ljudima u masi. Retoričar ukoliko želi da postigne određeni efekat besedom koju drži, treba da govori jezikom interesovanja, vrednosti i isprobanih veština. Određivanje teme i izdvajanje par osnovnih hipoteza, prvenstveno u misaonom procesu, a tek potom u verbalnom izražavanju, osnova je uspešne transformacije misli u govor. Između besednika, besede i publike, kao neizostavna karika pojavljuju se mediji masovnog komuniciranja; moglo bi se reći da bez medijskog posredovanja ne bi bilo ni besednika čiji bi se glas mogao čuti; posebno ne onog koji u procesu uveravanja i ubeđivanja slušalaca ne poznaje granice; tu mediji postaju besednikov lavirint ogleдалa, umnožavajući sliku i reči do nesagledivog mnoštva onih koji se u tom lavirintu zatiču kao publika (Đorđević, 2016). Prilikom izgovaranja, odn. oživljavanja misli, retoričar mora doneti etičnu odluku. To je unutrašnji proces koji predstavlja filter prečišćavanja i razdvajanja misli, selekcija trenutno najkorisnijih u odnosu na one koje su u datom trenutku najnepotrebnije. Takva vrsta odluke svakako će uticati na auditorijum i u odnosu na vrstu i kvalitet izgovorenih misli retoričar, odn. subjekt koji govori biće podvrgnut analizi. Ovakve misli iznete javno, mogu imati društvene, ali i ekonomske posledice. Vrlo mali broj odluka koje su konačni rezultat misaonog procesa bi smeo da bude donet bez operativne svih mogućih rešenja koja utiču na sticanje pozitivnog ili negativnog utiska, u zavisnosti šta je cilj retoričara. Po mišljenju Dekarta, za onoga kome očevidnost sačinjava poslednji kriterijum u pogledu istine, neslaganje je ne samo znak zablude u glavnoj stvari jednog od protivnika, nego i dokaz da ni jedan ni drugi istinu ne vidi jasno (Perelman, 1983). Izgovorene misli, bilo da su odabrane, ili nehotično izgovorene, odn. da su proizvod racia (ratio) ili emocia (emotio) neophodno je da budu izgovorene sa predznanjem retoričara, da one u trenutku kada dobiju svoj život, tj. kada budu izgovorene, izazivaju i snose određene posledice. Upravo te posledice sastavni su deo efekta koji utiče na stvaranje retoričkog identiteta.

## 6. ZAKLJUČAK

Retorika kao veština odlikuje se mogućnošću upotrebe i zloupotrebe. Kroz vreme ona je samo menjala auditorijum, a svrha je uvek bila ista. U zavisnosti od kvaliteta besednika rezultat je bivao zapažen i ostvaren ili pak totalno suprotno. Možemo zaključiti da je ono što govornik besedi ipak deo unutrašnjeg, misaonog bića govornika, te da iz tog ugla posmatrano besedništvo predstavlja način subjektivnog prezentovanja. U radu nije bilo pomena da i sam objektivni izgled besednika ulazi u sastav čulnog i vizuelnog dejstva na auditorijum, kao i mesto sa koga se govori, ali i masa kojoj se govori. Ovo su ključni činioci koji doprinose stvaranju retorički plodne atmosfere, koja iznosi konkluzije o retorici, retoričarima i besedama koje su izgovorene.

Najvažniji postupak u procesu stvaranja besede i retoričkog nastupa jeste prvenstveno poznavanje sebe, a potom i poznavanje ili makar prepoznavanje okolnosti u kojima će besednik prezentovati svoje misli. U tom slučaju veliki su izgledi da efekat izgovorenog ostavi željeni rezultat, odn. da prenese poruku auditorijumu. Da bi retoričar sam sebi poslužio kao izvor informacija potrebno je da temeljno analizira sam sebe. Pri toj analizi (pripremi) nužno je definisati ključne teme, hipoteze u datom govoru, osmisliti način na koji želi da počne i način na koji želi da završi besedu. Ukoliko govorimo o tzv. emotivno nadahnutim besedama, onda besednik nošen emocijama, pod uticajem auditorijuma, iznosi vlastite stavove, gde su mnogo veće šanse da samog sebe dovede u nezgodnu situaciju.

Dakle, došli smo do zaključka da besednik može besediti na već pripremljenu temu, kontrolišući sopstvene emocije, da u tom trenutku bude maksimalno profesionalan, da celu situaciju drži pod kontrolom i da vlada scenom, odn. ambijentom odakle se obraća publici. Međutim, postoje i ove druge besede koje besednici izgovaraju u stanju emotivnog naboja, podložni utisku auditorijuma, podstaknuti emocijom, nošeni ličnim stavovima i ubeđenjima za koja čvrsto veruje da su ispravna. U takvim situacijama više dolazi do izražaja unutrašnja komponenta bića (emotivna, intelektualna). To su najčešće situacije u kojima čovek ne može da se odupre emocijama (pozitivnim ili negativnim), kao na primer okrivljeni nakon čitanja oslobađajuće ili optužujuće presude, lice koje je izgubilo bliskog srodnika ili dete, politički lider koji daje intervju nakon pobeđe na izborima i slično. I u jednoj i u drugoj situaciji dominantan je unutrašnji, psihički deo bića. On je determinanta koja profilise besednika i u procesu profilisanja kategoriše istog.

Česti su primeri u svakodnevnom životu, da i pravnik angažuje ličnog advokata, za odbranu sopstvenog interesa, jer advokatska praksa kazuje da ni jedan čovek (u ovom slučaju advokat) ne može objektivno da zaključuje u situaciji kad je dovedeno u pitanje njegovo lično stanje i njegov lični interes. S toga se preporučuje da o nama i za naš račun uvek naše interese brani drugo lice, koje će se prema određenoj stvari poneti objektivno, profesionalno i neemotivno. Iz ovog zaključujemo da i emotivni i neemotivni retorički iskaz imaju svoj i pozitivan i negativan efekat, ali u oba slučaja imenuju govornika i dokazuju da je retorika veština ličnog prezentovanja.

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# DOZVOLJENO PREKORAČENJE RAČUNA

## OVERDRAFT LIMIT

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DOI:

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**Apstrakt:** Stari bankarski proizvod dobija poslednjih godina na značaju, preuzima prevlast u odnosu na ostale ponude. Na primeru tri banke će biti prikazana njihova ponuda za dozvoljeno prekoračenje za fizička lica i na osnovu toga će se videti koja je banka izašla sa najpovoljnijom ponudom tog proizvoda. Zašto su banke dozvolile prekoračenje računa, svesno ili ne nam nameću nešto što samo njima odgovara? Kako se izvući iz toga, kako preživeti bez tih pogodnosti, koje su sve samo ne pogodnosti?! Ulazak u nedozvoljeno prekoračenje je jedna od najvećih kazni kojom banka može kazniti fizičko lice sa neverovatnom zateznom kamatom koja se može videti u bankarstvu.

**Ključne reči:** Prekoračenje limita, Banka, Kamata, Fizičko lice.

**Abstract:** The old banking product has been gaining importance in the recent years and becoming dominant in comparison to other offers. Their offer for the overdraft will be shown through three examples and, based on that, it will be clear which bank has the most favorable offer for that product. Why have banks allowed overdraft? Is it done consciously or not, or to impose what is only suitable for them? What is the way to avoid that, or how to survive without those benefits which represent everything but no benefits!? Entering into an overdraft is one of the largest penalties that banks use to punish individuals with an incredible default interest, which is seen in banking.

**Keywords:** Overdraft limit, Bank, Interest, Individual.

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## 1. UVOD

Državnik, filozof i naučnik Benjamin Franklin jednom je izjavio: “Ako želite da znate vrednost novca idite i pokušajte da ga pozajmite od nekog”. Oduvek su generacije – milioni i milioni potrošača (pojedinci ili porodice) pokušavali baš to – da pozajme novac – da bi dopunili svoj prihod i poboljšali svoj način života (Rose & Hudgins, 2005). Dopunjavanje prihoda u današnje vreme se najčešće izvršava kroz dozvoljeni minus. Nekada zbog pravih razloga, nekada zbog hira, ali u svakom slučaju dozvoljeni minus je tu da pokrije sve novčane nedostatke.

## 2. PRIKAZ DOZVOLJENOG PREKORAČENJA

Banke su finansijske institucije koje primaju depozite i odobravaju kredite. Pod pojmom banke, podrazumevaju se firme poput komercijalnih banaka, štedno kreditnih organizacija, štedionica i kreditnih unija. Banke su finansijski posrednici s kojima ljudi najčešće stupaju u kontakt kada

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im je potreban kredit radi kupovine kuće ili kola (Mishkin, 2006). Neretko se dešava da se kašnjenje otplate rate kredita pokriva novcem iz dozvoljenog minusa za koji su kamate nepovoljne po korisnika. Obično se smatra da je kamata cena pozajmljenog novca. Dakle, vezana je za zajmovni kapital. Ali kamata je „iracionalni oblik cene“, jer ona nije jednaka vrednosti koja se pozajmljuje, već je samo njen deo (Komazec & Ristić, 2009).

## 2.1. Poštanska štedionica

Ideja da se osnuje Poštanska štedionica datira davne 1871. godine, a sprovedena je u delo 1921. godine od kada do dana današnjeg važi za jednog od nosioca bankarskog sektora.

Pravo na odobrenje dozvoljenog prekoračenja po tekućem računu – fizičko lice mora da ima redovan mesečni priliv, da redovno izmiruje zaduženja prema banci, da ima pozitivnu ocenu od kreditnog biroa i da bude u pozitivnom saldu na tekućem računu dana kada podnosi zahtev. Dozvoljeno prekoračenje se može dobiti na najmanje 3, a najduže 24 meseca. Iznos odobrenog prekoračenja može biti od jedne do maksimalno jednog i po mesečnog primanja u poslednja tri meseca.

Troškovi dozvoljenog prekoračenja:

- Godišnja naknada za administriranje dozvoljenog prekoračenja iznosi:
  - za penzionere 350 dinara,
  - za ostale klijente 600 dinara.
- Naknada za izveštaj iz kreditnog biroa 246 dinara
- Trošak menice 50 dinara.
- Kamatna stopa fiksna 29,85%
- EKS na godišnjem nivou 35,89%<sup>4</sup>

## 2.2. Eurobank

Banka koja iznova svake godine pokazuje da je jedna od najpouzdanijih finansijskih institucija u Srbiji i koja zadovoljava potrebe svojih klijenata i igra važnu ulogu u društvu.

Što se tiče Eurobanke, ona dozvoljava dozvoljeni minus na maksimalno 24 meseca, a iznos je do dve mesečne zarade.

Troškovi dozvoljenog prekoračenja:

- 400 dinara sa rokom do 12 meseci
- 500 dinara sa rokom do 24 meseca
- Naknada za izveštaj iz kreditnog biroa 246 dinara
- Trošak menice 50 dinara.
- Nominalna kamatna stopa 33,50%
- EKS 40,01%<sup>5</sup>

## 3.1. Intesa Bank

Poverenje od 1,34 miliona korisnika, preko 3.000 zaposlenih, 155 ekspozitura i neprestano kreiranje novih proizvoda i usluga stavlja Intesa banku u sam vrh bankarskog sektora Srbije.

<sup>4</sup> <http://www.posted.co.rs/tekuci.html>, 05.03.2020.

<sup>5</sup> <https://www.eurobank.rs/racuni/racuni/dozvoljeno-prekoracenje-racuna.1665.html>, 01.04.2020.

Intesa banka dozvoljeno prekoračenje nudi klijentima na 36 meseci. Iznos dozvoljenog prekoračenja može da se kreće od od 50.000 do 150.000 dinara.

Troškovi dozvoljenog prekoračenja:

- Naknada za izveštaj iz kreditnog biroa 246 dinara
- Trošak menice 50 dinara.
- Nominalna kamatna stopa 29,85%
- EKS 34,70%<sup>6</sup>

### 3. ZAKLJUČAK

Jako primamljivo zvuči sam naziv *dozvoljeni minus*, čak postoje banke koje do određenog iznosa, primer Raiffeizen banke koja daje svojim korisnicima mogućnost da mesečno prekorače 10.000 dinara bez bilo kakve naknade, samo da li je to povoljnost ili samo mamac za dalje.

Cenovna konkurencija je najčešći oblik konkurencije u bankarstvu. To se odnosi na tržišno formiranje kamatnih stopa, strukturu kamatnih stopa, kamatnu maržu, proviziju, kvalitet usluga komitentima i dr. (Živković et all, 2007). Na primeru tri banke smo ukratko prikazali cenovnu konkurenciju za odabranu uslugu, tj., cenu usluge koja nije uopšte primamljiva ni na samom startu i koja se kreće od 29,85% kod Poštanske štedionice i Intesa banke pa do 33,50% kod Euro banke, tek je efektivna kamatna stopa priča za sebe ide čak do 40,01%, što ostavlja bez teksta sve koji pokušavaju da razumeju tu vrstu bakarskog proizvoda.

Naše predstavljene banke, kamatu za nedozvoljeno prekoračenje izjednačavaju sa efektivnom kamatnom stopom, tako da se isplativost prekoračenja ne uzima uopšte u razmatranje. Krediti, kreditne kartice, svaki vid finansijskog izvlačenja je bolji od samog ostanka i borbe protiv nedozvoljenog prekoračenja. Sve se svodi na to i da kad legnu mesečna primanja to je samo trenutna olakšica koja se isto završava kao i što je krenula, sve u svemu nedozvoljeno prekoračenje je borba sa vetrenjačama u kojoj krajnji korisnik nikako ne izlazi zadovoljan.

Probleme na koje nailazimo moguće je rešiti na više načina, jedan od njih je podizanje kredita, drugi je kreditna kartica, sve su to jeftiniji proizvodi koji su dostupni, takođe su dostupni i razni lični planeri. To su ideje ili da ih drugačije nazovemo aplikacije kroz koje se vode lične finansije, tj., lični budžet. Na prvi pogled one izgledaju odbojno, ali nam kroz redovno unošenje naših prihoda i rashoda već daju jasniju sliku gde nam nepotrebno odlazi novac, šta bi mogli da smanjimo, povećamo ili jednostavno da vidimo gde grešimo.

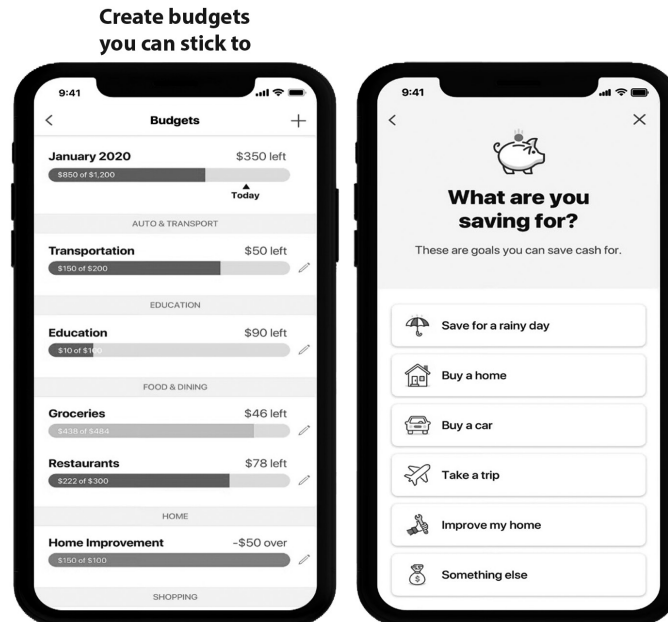
Kod vođenja ličnih finansija bitno je da se ne odustane rano, najoptimalniji vremenski rok gde bi trebalo da se vide rezultati je najmanje tri meseca.<sup>7</sup> Već nakon tog perioda biće jasnije gde to nepotrebno ide novac, kako su rashodi veći od prihoda. Vođenje ličnih finansija otvara mogućnost lične štednje, gde bi kroz zadat iznos i vremenski period napravili takmičenje sami sa sobom i dokazali da li smo kadri ili ne.

Besplana platforma koju je napravila Erste banka vam može odgovoriti na dodatna pitanja u vezi ličnih finansijskih problema, može vas naučiti i više o štednji, karticama, elektronskom

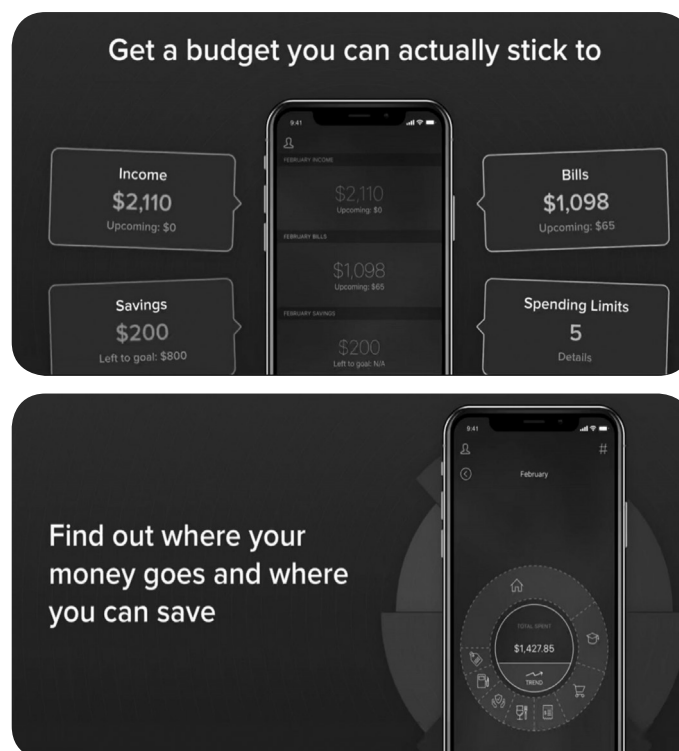
<sup>6</sup> <https://www.bancaintesa.rs/stanovnistvo/platni-racuni/intesa-hit.89.html>, 01.04.2020.

<sup>7</sup> <https://novaekonomija.rs/finansijski-re%C4%8Dnik/saveti-za-vo%C4%91enje-bud%C5%BEeta,02.04.2020>.

bankartsvo itd.<sup>8</sup> Takođe, najbolje ocenjene aplikacije za savremene uređaje koje su jednostavne za korišćenje, a donose jasniju sliku kako i gde grešimo ili kako i gde smo dobri, nekada je dovoljno samo preusmeriti, nekada izbaciti neke sitne troškove, čak i pametno uložiti novac, sve su to rešenja koja se nude kroz pomenute aplikacije na osnovu naših navika - Mint, PocketGuard, YNAB, Wally, Good budget<sup>9</sup>, kao i mnogi drugi.



Slika 1. Mint



Slika 2. PocketGuard

<sup>8</sup> <https://www.ersteznali.rs/>, 02.04.2020.

<sup>9</sup> <https://ersteznali.rs/poglavlje/evidencija-prihoda-i-rashoda>, 02.04.2020.

Mogućnosti koje nude navedene aplikacija pored jasnog stanja o finansijama dodatno olakšavaju život povezivanjem sa bankovnim računima, sa raznim ličnim online računima kao što je PayPal, sa kalendarom obaveza, sa trajnim nalogima, kreditnim karticama, plaćanjima računa, rata kredita, sa još puno olakšica koje daju prednost i smanjuju vreme provedeno radi rešavanja svega toga i samim tim nam daju prostora da kvalitetnije provedemo vreme, a što je i najvažnije za ovaj rad da nas sačuva van nedozvoljenog prekoračenja.

Aplikacije su jednostavne za korišćenje, potrebno je samo da ih u AppStoru, Google Play-u ili nekoj drugoj prodavnici operativnog sistema na vašem uređaju pronađete, instalirate i nakon toga možete da ih koristite.

Pri početku pisanja rada stanje u zemlji je bilo stabilno, tamo negde daleko, nama nebitno u tom trenutku pojavio se korona virus. Kako se pisanje bližilo kraju, tako se i virus širio na ceo svet, pa i na našu zemlju. Država je uvela dodatne mere olakšanja stanovnicima koji su pod kreditima, ali se niko nije zapitao šta će se desiti sa osobama koji su trenutnom situacijom zadeseni i koji su morali ne svojom voljom da odu u nedozvoljeno prekoračenje. Kriza će i proći ali će posledice biti dugotrajne po te korisnike koji nisu uspeli da izbalansiraju i da prebrode krizu bez odlaska u nedozvoljeni minus.

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# UTJECAJ JAVNOG DUGA NA PRINOSE DRŽAVNIH OBVEZNICA U EMU

## THE IMPACT OF PUBLIC DEBT ON GOVERNMENT BOND YIELDS IN EMU COUNTRIES

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DOI:

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**Sadržaj:** Glavni cilj ovog rada je istražiti utjecaj fiskalnih neravnoteža zemalja EMU na prinose državnih obveznica pojedine zemlje članice EMU u razdoblju od 2002. do 2018. godine. U odnosu na već provedena teorijska i empirijska istraživanja, ovaj rad predstavlja iskorak u postojećoj literaturi na način da se navedeni utjecaj analizira korištenjem tehnika prostorne ekonometrije koje omogućavaju promatranje prostorne zavisnosti između zemalja, a isto tako omogućavaju ispitivanje najznačajnijeg transmisijskog kanala preko kojeg je takav utjecaj moguć. Glavna pretpostavka je da na prinose državnih obveznica pojedine zemlje članice EMU ne utječu samo njene fiskalne neravnoteže, već određeni utjecaj imaju i fiskalne neravnoteže susjednih zemalja članica. Provedena analiza je potvrdila očekivanja autora i sugerirala sljedeće nalaze: utjecaji javnog duga i primarnog deficita na prinose državnih obveznica su pozitivni i statistički značajni; najznačajniji transmisijski kanal je geografski kanal; 49% ukupnog utjecaja se pripisuje indirektnim/spillover efektima.

**Ključne riječi:** Javni dug, Prinosi na državne obveznice, Tehnike prostorne ekonometrije, Utjecaj prelijevanja, Transmisijski kanali, EMU.

**Abstract:** The main aim of this paper is to investigate the impact of fiscal imbalances of EMU countries on government bond yields of an individual EMU member country in period 2002-2018. In comparison to theoretical and empirical research already carried out, this paper represents a step forward in the existing literature by analyzing this impact using spatial econometric techniques that allow for spatial dependence between countries while also allowing the examination of the most significant transmission channels. The main assumption in this paper is that government bond yields of an EMU member country are not only affected by its own fiscal imbalances but also by fiscal imbalances of its neighboring member states. The analysis confirmed authors' expectations and carried out the following findings: authors find positive and significant impact of public debt and primary deficit on government bond yields; the most significant transmission channel is geographical channel; 49% of the overall impact can be attributed to indirect/spillover effects.

**Keywords:** Public debt, Government bond yields, Spatial econometric techniques, Spillover effect, Transmission channels, EMU.

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### 1. UVOD I PREGLED LITERATURE

Ispitivanje odnosa fiskalnih neravnoteža, javnog duga te deficita, i prinosa državnih obveznica (dugoročnih kamatnih stopa) predstavlja kontroverzno pitanje u ekonomiji na kojeg još uvijek ne postoji jednoznačan odgovor. Ovo pitanje postaje aktualno nakon posljednje financijske

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krize kada su fiskalne neravnoteže u svim zemljama utjecale na porast prinosa državnih obveznica, a samim time izazvale i negativne implikacije na cjelokupnu ekonomsku aktivnost u pojedinoj zemlji. Ekonomska situacija jedne zemlje te njene fiskalne neravnoteže će preko utjecaja na dugoročne kamatne stope dovesti do promjena u investicijama, samim time i do promjena u agregatnoj potražnji te će posljedično utjecati i na sami ekonomski rast. Iz razloga što taj odnos može imati značajne implikacije za ekonomiju, postaje sve češće predmet empirijskih radova. Postoji veliki broj ekonomista koji su u svojim istraživanjima dokazali pozitivan utjecaj fiskalnog deficita i javnog duga na dugoročne kamatne stope. Međutim, postoji i određen broj autora koji vođeni [4] smatraju da takav odnos ne postoji. Iz toga proizlaze dvije paradigme koje na sebi svojstven način objašnjavaju navedene tvrdnje.

Standardna ekonomska teorija vezu između navedenih varijabli prikazuje putem IS-LM modela, gdje fiskalna ekspanzija u vidu povećanja javne potrošnje povećava agregatnu potražnju i njenu krivulju pomiče udesno. Ovakav pomak krivulje će dovesti sustav u ravnotežu, ali ta će ista ravnoteža biti praćena većim ravnotežnim domaćim proizvodom i višim ravnotežnim realnim kamatnjakom. Opisani kratkoročni model, uzevši u obzir teoriju očekivanja (engl. *expectation theory*) jasno pokazuje da što zemlja ima veći deficit i javni dug, ima i veće dugoročne kamatne stope.

S druge pak strane nalazi se skupina teorija koja se ne slaže s ovim objašnjenjem, već se oslanja na neoklasični Ricardov teorem ekvivalencije. Glavno polazište ovog teorema jest da fiskalna politika nema utjecaja na gospodarstvo, a samim time ni na dugoročne kamatne stope, odnosno bilo kakva promjena fiskalne politike bit će poništena djelovanjem racionalnog privatnog sektora koji će nastojati izbjeći veliko porezno opterećenje u budućnosti.

Kretanje dugoročnih kamatnih stopa može dati podatke o tržišnoj situaciji, ali i biti putokaz za investitore. Kad se zemlja suoči s proračunskim deficitom, a nema dovoljno vlastitih sredstava, jedan od načina financiranja jest izdavanje državnih obveznica. Izdavanje državnih obveznica automatski dovodi do promjene ekonomske situacije u samoj zemlji odnosno dovodi do istiskivanje (engl. *crowding out*) privatnih investicija u zemlji. Upravo ovdje leži ovisnost dugoročnih kamatnih stopa o razini javnog duga i jedan je od razloga zašto vlada treba voditi održivu politiku usmjerenu prema gospodarskom rastu. S druge strane, i za međunarodne investitore je izdavanje državnih obveznica znak da se zemlja suočava s makroekonomskim poteškoćama te ukoliko kupe njezine obveznice pomno prate daljnje stanje iz razloga što svaka državna obveznica sa sobom nosi određeni rizik. Uslijed fiskalnih neravnoteža može doći do kreditnog rizika zemlje, što pak utječe na nesigurnost investitora da će mu se investicija isplatiti. Zbog većeg rizika i nesigurnosti investitor će se nastojati zaštititi višim prinosima na kupljene državne obveznice što svakako nije dobro za zemlju koja izdaje obveznice jer dodatno povećava troškove zaduživanja. Stoga razvidno postaje da na pozitivnu vezu fiskalnih neravnoteža i prinosa državnih obveznica svakako utječe komponenta rizika koju investitori imaju ugrađenu u svoja očekivanja i koju obveznice povlače za sobom.

Zadnja ekonomska kriza bila je kriza globalnih razmjera koja nije dovela u pitanje samo stabilnost pojedine zemlje, već i opću stabilnost. Takva situacija je zabilježena u slučaju Europske monetarne unije (EMU) koja je iz te krize izašla s velikim troškovima i problemima. Jedan od glavnih razloga takvih posljedica krize može biti prevelika financijska integracija koja je dovela do toga da se problem iz jedne zemlje brzo prenosi na drugu. Naime, zemlje EMU-a su integracijom u uniju svjesno pristale na to da njihova monetarna politika postane zajednička te su



također prihvatile kriterije konvergencije koje su dovele do još veće integrirane strukture. Vodeći se tim činjenicama logično je postaviti pitanje može li povećana integracija između zemalja, bilo trgovinska ili financijska, objasniti prinose na državne obveznice.

Većina dosad objavljenih radova bavila se ispitivanjem utjecaja javnog duga i deficita pojedine zemlje na vlastite prinose državnih obveznica. Tako su [5], [17], [18], [19] redom potvrđivali pozitivan utjecaj spomenutog odnosa. S druge strane, postoji nekolicina autora koji su ispitivali utjecaj prelijevanja javnog duga na prinose državnih obveznica između zemalja. Rezultati do kojih su došli [3], [10], [12] i [20] potvrdili su postojanje utjecaja prelijevanja fiskalnih neravnoteža između zemalja. Općenito se da zaključiti kako porast javnog duga i deficita pozitivno utječe na porast dugoročnih kamatnih stopa, međutim ono po čemu su se radovi razlikovali je bila visina i vrijednost utjecaja. Razlog za takvu heterogenost rezultata može se pronaći u samom uzorku ispitivanja, izboru kontrolnih varijabli i ekonometrijskih modela koji se odnose na obične panele ili vektorske autoregresijske (VAR) modele. Pored navedenih autora, postoji i nekolicina autora, poput [10], [14] i [18] koji su nastojali dokazati i kvantificirati stupanj utjecaja prelijevanja (engl. *spillover effect*) javnog duga na visinu dugoročnih kamatnih stopa preko međunarodnog tržišta obveznica u zemljama u razvoju, naprednim ekonomijama i zemljama Organizacije za ekonomsku suradnju i razvoj (engl. *Organisation for Economic Cooperation and Development*; OECD). Tako su primjerice [6] procjenjivali utjecaj duga na razlike u prinosisima (engl. *spread*) kamatnih stopa, dok su [11] analizirali determinante razlika u prinosisima državnih obveznica između zemalja. S druge strane, [9] su jedini testirali kanal financijske integracije koristeći tehnike prostorne ekonometrije.

Prostorna ekonometrija je područje ekonometrije koja ispituje odnos varijabli uzimajući u obzir međuovisnost opservacija u prostoru pritom se koristeći tzv. prostornom matricom,  $W$ , koja opisuje prostorni raspored geografskih jedinica u uzorku [13]. Do sada još uvijek ne postoji nijedan rad koji je na primjeru EMU ispitao utjecaj javnoga duga na prinose državnih obveznica vodeći računa o stupnju međupovezanosti zemalja, stoga će ovaj rad provedenom analizom u kojoj se koriste tehnike prostorne ekonometrije (engl. *spatial econometric techniques*) pokušati nadoknaditi takav nedostatak u literaturi.

Uzevši u obzir postojanje efekta prelijevanja, poremećaj u zemlji A izravno pogađa njezinu susjednu zemlju B pa se neravnoteža nastala u zemlji B može manifestirati izravno na njezinu susjednu zemlju C i sve tako dok se ponovno ne odrazi na zemlju A. To se može dogoditi zbog nedostatka povjerenja u „no bail-out“ klauzulu, što implicira da su zemlje članice jednim dijelom odgovorne za rizik drugih zemalja članica u Uniji [2]. Pretpostavka da dugoročne kamatne stope jedne zemlje nisu pogođene samo njezinim fiskalnim neravnotežama, već da na njihovu visinu utječu fiskalne neravnoteže ostalih zemalja otvara pitanje je li susjedna međupovezanost utječe na visinu samog utjecaja. U skladu s tim, vrijedi istražiti je li efekt prelijevanja veći između zemalja koje su geografski blizu te između kojih postoji veći stupanj trgovinske i financijske povezanosti.

## 2. EMPIRIJSKO ISTRAŽIVANJE

Ovo poglavlje predstavlja okosnicu rada gdje će se, uzimajući u obzir prostorne zavisnosti, ispitati utjecaj fiskalnih neravnoteža zemalja članica EMU-a i njihov utjecaj na dugoročne kamatne stope pojedine članice. Za tu svrhu će se, u razdoblju od 2002. do 2018. godine (na godišnjoj bazi), analizirati set od 18 zemalja članica EMU-a, a to su redom: Austrija, Belgija, Cipar, Finska, Francuska, Njemačka, Grčka, Irska, Italija, Latvija, Litva, Luksemburg, Malta, Nizozemska, Portugal,

Slovačka, Slovenija i Španjolska. S obzirom da prostorna analiza zahtjeva korištenje balansiranog panela podataka, u uzorak nisu uključene sve zemlje EMU-a. Konkretno, iz razloga što nije bilo dostupnih podataka za varijablu prinosi na državne obveznice, iz analize je isključena Estonija.

Varijable (izražene u postotcima) koje su uključene u model i koje su se koristile u analizi su standardne kontrolne varijable koje ujedno predstavljaju pokazatelje ekonomskog rasta i razvoja zemlje. Zavisnu varijablu modela predstavljaju prinosi na državne obveznice, dok nezavisne varijable čini set sastavljen od javnog duga, primarnog salda, stope rasta BDP-a, inflacije i kratkoročnih kamatnih stopa. Detaljniji opis korištenih varijabli dan je u Tablici 1, a sadržava opis i izvor samih varijabli. U Tablici 2 sadržana je njihova deskriptivna statistika.

**Tablica 1.** Definicija i izvori varijable

Oznaka varijable	Opis varijable	Izvor
Prinosi na državne obveznice (%)	Prosječni prinos na dugoročne državne obveznice.	Economist Intelligence Unit
Javni dug (% BDP-a)	Ukupni dug (u lokalnoj i stranoj valuti) države prema domaćim rezidentima, stranim nacionalnim i međunarodnim institucijama kao što je MMF (izražen kao % BDP-a).	Economist Intelligence Unit
Primarni saldo (% BDP-a)	Konsolidirana proračunska primanja (koja uključuju primljene zajmove kao i one otplaćene) umanjena za nekamatne rashode (izraženo kao % BDP-a).	Economist Intelligence Unit
Kratkoročna kamatna stopa (%)	Ponderirana prosječna kamatna stopa na međubankovne zajmove u lokalnoj valuti.	Economist Intelligence Unit
Stopa rasta BDP-a (%)	Postotna promjena realnog BDP-a između dvaju razdoblja tijekom prethodnih godina.	Economist Intelligence Unit
Inflacija (CPI, %)	Postotna promjena indeksa potrošačkih cijena u lokalnoj valuti (prosjeak razdoblja) tijekom prethodnih godina.	Economist Intelligence Unit

Izvor: Izrada autora

**Tablica 2.** Deskriptivna statistika

Varijabla	Opservacija	Srednja vrijednost	Standardna devijacija	Minimum	Maksimum
Prinosi na državne obveznice (%)	306	3.76	2.45	-0.18	22.50
Javni dug (% BDP-a)	306	68.13	36.30	6.95	181.83
Primarni saldo (% BDP-a)	306	-0.36	3.43	-29.24	6.53
Kratkoročna kamatna stopa (%)	306	1.63	1.77	-0.33	8.03
Stopa rasta BDP-a (%)	306	2.13	3.76	-14.81	25.12
Inflacija (%)	306	2.03	1.93	-4.46	15.41

Izvor: Izrada autora

Tablica 3. CD-test

Varijabla	CD-test	p-value	Corr	abs(corr)
Prinos na državne obveznice (%)	33.17	0	0.65	0.676
Javni dug (% BDP-a)	35.06	0	0.687	0.764
Primarni saldo (% BDP-a)	24.2	0	0.474	0.49
Kratkoročna kamatna stopa (%)	47.92	0	0.94	0.94
Stopa rasta BDP-a (%)	32.34	0	0.634	0.634
Inflacija (CPI, %)	31.98	0	0.627	0.627

Izvor: Izrada autora

Prvi korak u analizi je provođenje CD testa (Pesaran, 2004) (*global CD test*) za svaku varijablu kojim se ispituje postojanje zavisnosti između grupa (*engl. cross-sectional dependence*), odnosno zemalja. Pesaranov CD test za međuzavisnost jedinica objašnjava situaciju prisustva istovremene korelacije, odnosno međuzavisnosti između varijabli koje se promatraju. Problem sa međuzavisnošću između jedinica dovelo bi do problema u vjerodostojnosti podataka, a posljedično i do problema pristranosti u rezultatima. Rezultati iz Tablice 3 sugeriraju odbacivanje  $H_0$  hipoteze, odnosno sugeriraju odbacivanje hipoteze o postojanju nezavisnosti između jedinica (*engl. cross-sectional independence*) ( $p\text{-value}=0.000$ ). To, pak, implicira postojanje zavisnosti između jedinica, a nadalje se pretpostavlja da je ta zavisnost prostornog karaktera.

U nastavku je dan prikaz statičkog prostornog modela s fiksnim efektima koji će se primijeniti u analizi [7]:

$$y_{it} = \alpha + \rho \sum_{j=1}^n w_{ij} y_{jt} + \sum_{k=1}^K x_{itk} \beta_k + \sum_{k=1}^K \sum_{j=1}^n w_{ij} x_{jtk} \theta_k + \mu_i + \gamma_t + v_{it} \quad (1)$$

$$y_{it} = \alpha + \rho \sum_{j=1}^n w_{ij} y_{jt} + \sum_{k=1}^K x_{itk} \beta_k + \sum_{k=1}^K \sum_{j=1}^n w_{ij} x_{jtk} \theta_k + \mu_i + \gamma_t + v_{it}$$

pri čemu je  $y_{it}$  zavisna varijabla te označava prinose na državne obveznice,  $i$  indeks prostorne dimenzije,  $t$  je indeks vremenske dimenzije,  $x_{it}$  označava set nezavisnih varijabli,  $w_{ij}$  je prostorna matrica,  $\mu_i$  fiksni efekti,  $\gamma_t$  vremenski efekt te  $\epsilon_{it}$  koja pak označava normalno distribuiranu grešku.

Model (1) uključuje tri prostorna modela koja predstavljaju glavni fokus prostorne ekonometrije, *Spatial Autoregressive Model (SAR)*, *Spatial Durbin Model (SDM)* i *Spatial Error Model (SEM)*. Sva tri modela imaju svoje karakteristike po kojima se uz postojeće pretpostavke međusobno razlikuju. SDM model u sebi sadrži egzogene interakcijske efekte po kojima zavisna varijabla jedne jedinice ovisi o nezavisnoj varijabli drugih jedinica. Po svojoj definiciji, SDM model bi bio najbolji izbor za ovaj rad. Svaki od navedenih prostornih modela ima određene pretpostavke. Primjerice, SAR model pretpostavlja da je  $\theta = 0$  i da je  $\lambda = 0$ , SDM model pretpostavlja da je  $\lambda = 0$ , dok SEM model pretpostavlja da je  $\rho = 0$ . Naknadno se provedbom jednog od dijagnostičkih testova utvrđuje koji od modela najbolje odgovara za analizu.

Dakle, radi se o modelu za kojeg vrijedi pretpostavka da se konstantni član mijenja sa svakom jedinicom promatranja, s tim da je ipak konstantan u vremenu. Međutim, navedeni model, kao što je vidljivo, proširen je uključivanjem prostorne matrice koja predstavlja središte prostornih modela. To je ne-negativna matrica koja kvantificira povezanost između jedinica promatranja, u ovom slučaju zemalja EMU. Matrica se sastoji od dvije vrste elemenata - onih jednakih nuli, u slučaju kada prostorne jedinice nisu susjedi, te onih različitih od nule, kada se smatra da su pro-

storne jedinice susjedi. Dijagonalni elementi predstavljaju tzv. *direktne efekte* dok elementi van dijagonale predstavljaju tzv. *indirektne efekte* koji su okosnica prostorne ekonometrije. Upravo su ti pozitivni elementi različiti od nule važni jer sugeriraju postojanje utjecaja geografske povezanosti, odnosno oni mjere razliku između udaljenosti dviju jedinica. S obzirom da ključnu ulogu u radu imaju transmisijски kanali koji se testiraju preko matrice prije same analize ih je potrebno konstruirati. Prilikom konstruiranja matrica bilateralne trgovine i informacijskog kanala korištena je metodologija opisana u radu [18]. Za izradu matrice bilateralne trgovine korišteni su podaci o ukupnoj bilateralnoj trgovini dostupni na stranicama *World Integrated Trade Solutions (WITS)* koristeći World Standard Trade International Classification (STIC revision 2). Ti podaci bilateralne trgovine se sastoje od godišnjih podataka uvoza i izvoza pojedinih zemalja. Kako bi se kvantificirao trgovinski odnos između zemalja, korištena je sljedeća jednadžba:

$$W_{ij,t} = \frac{M_{ij,t} + X_{ij,t}}{GDP_{it} + GDP_{jt}} \quad (2)$$

pri čemu  $M_{ij,t}$  označava uvoz iz zemlje i u zemlju j u vremenu t,  $X_{ij,t}$  izvoz iz zemlje i u zemlju j u vremenu t,  $GDP_{it}$  nominalni bruto domaći proizvod zemlje i u vremenu t (izražen u dolarima) te  $GDP_{jt}$  nominalni bruto domaći proizvod zemlje j u vremenu t (izražen u dolarima). Matrica je kreirana tako da na glavnoj dijagonali ima nule, a ostali elementi su dobiveni na način definiran jednadžbom (2). Naposljetku, kako bi matricu standardizirali po retcima, u završnom koraku potrebno je prethodno izračunate podatke o trgovinskom odnosu svake zemlje podijeliti sa zbrojem cijelog retka, tako da je suma tih elemenata u svakom retku 1. Matrica informacijskog kanala kreirana je vodeći se metodologijom koju su u svom radu također koristili [18], a kao indikator je korišten udio proračunskog salda u BDP-u zemalja članica. Podaci o udjelu proračunskog salda preuzeti su iz baze podataka dostupnoj na internet stranicama Svjetske banke (engl. The World Bank; WB). Za uspostavu odnosa između zemalja korištena je sljedeća jednadžba:

$$w_{ij,t}^l = \frac{1}{|A_{i,t}^l - A_{j,t}^l| + 1} \quad (3)$$

pri čemu je vrijednost udjela proračunskog salda u BDP-u zemlje i u vremenu t i je vrijednost udjela proračunskog salda u BDP-u zemlje j u vremenu t. Bitno je primjetiti da se vrijednosti nalaze u apsolutnim zagrada, što implicira da će indikator imati pozitivnu vrijednost. Kako bi se dobio potrební matrični oblik, kao i u prethodnom slučaju, svaka dobivena vrijednost podijeljena je s ukupnim zbrojem cijelog retka. Posljednji transmisijски kanala koji će se analizirati je geografski kanal. Prostorna geografska matrica predstavlja udaljenosti između dviju jedinica, u ovom slučaju dviju zemalja. Postoji više vrsta te matrice, a u radu je korištena inverzna matrica udaljenosti koja pretpostavlja da su zemlje koje su bliže jedna drugoj sličnije, dok se ta sličnost umanjuje što je udaljenost između zemalja veća. Štoviše, što su zemlja A i zemlja B bliže jedna drugoj veća je vjerojatnost da će *spillover* efekt biti veći između te dvije zemlje nego neke treće.

### 3. REZULTATI

Kako bi se ispitalo je li utjecaj prelijevanja fiskalnih neravnoteža na prinose na državne obveznice između zemalja EMU-a zaista postoji i na koji način se takav utjecaj odvija, u radu će se koristiti nekoliko prostornih matrica - matrica bilateralnog kanala, matrica informacijskog kanala i geografska matrica. Svaka od tih matrica će se zasebno procijeniti skupa s rezultatima izabranih osnovnih varijabli te će se na temelju toga procijeniti značajnosti pojedinog transmisijskog kanala. Prije samih rezultata, također je bitno napomenuti da se u prostornim modelima razlikuju ukupni, direktni i indirektni efekti. Direktni efekti odnose se na situaciju u

kojoj promjene nezavisne varijable izravno utječu na promjenu zavisne varijable u promatranoj prostornoj jedinici (primjerice, kada promjene u javnom dugu jedne zemlje utječe na promjene prinosa na državne obveznice te zemlje). S druge strane, indirektni efekti se odnose na situaciju kada promjena nezavisne varijable jedne jedinice ne pogađa samo zavisnu varijablu te jedinice već se njen utjecaj osjeća na zavisnoj varijabli drugih jedinica (primjerice, promjene u javnom dugu jedne zemlje utječe na promjene u prinosima na državne obveznice druge zemlje, ili konkretnije u ovom slučaju, kada na dugoročne kamatne stope jedne zemlje članice EMU-a utjecaj imaju fiskalne neravnoteže unutar cijelog područja EMU-a). Kod indirektnih efekata je prisutan „*feedback*“ efekt koji se odnosi na situaciju kad poremećaj u zemlji A izravno pogađa njezinu susjednu zemlju B te se ta neravnoteža nastala u zemlji B može manifestirati izravno na njezinu susjednu zemlju C i sve tako dok se ponovno ne odrazi na zemlju A. Pored ta dva efekta postoje još i ukupni efekti koji su jednaki zbroju direktnih i indirektnih efekata. [32] sugeriraju dvije interpretacije ukupnih efekata. Prvo, ukupni efekti daju odgovor na pitanje koliki će biti ukupni utjecaj na dugoročne kamatne stope individualnih jedinica promatranja ukoliko sve jedinice promatranja povećaju javni dug, s druge strane mjeri ukupni utjecaj rasta javnog duga jedne jedinice na dugoročne kamatne stope svih jedinica promatranja.

**Tablica 4.** Rezultati SDM modela (bilateralni, informacijski i geografski kanal)

<b>W=bilateralni, informacijski i geografski kanal</b>	<b>(SDM – bilateralni kanal)</b>	<b>(SDM – informacijski kanal)</b>	<b>(SDM – geografski kanal)</b>
	<b>Prinosi na državne obveznice</b>	<b>Prinosi na državne obveznice</b>	<b>Prinosi na državne obveznice</b>
<b>Glavna analiza</b>			
Stopa rasta BDP-a (%)	-0.228*** (0.0282)	-0.213*** (0.0286)	-0.228*** (0.0283)
Inflacija (CPI, %)	-0.00296 (0.0559)	-0.000143 (0.0568)	-0.0346 (0.0570)
Primarni saldo (% BDP-a)	-0.0177 (0.0294)	0.000113 (0.0293)	-0.00423 (0.0289)
Javni dug (% BDP-a)	0.0487*** (0.00635)	0.0506*** (0.00619)	0.0478*** (0.00655)
Kratkoročna kamatna stopa (%)	0.728*** (0.142)	0.755*** (0.126)	0.746*** (0.130)
<b>Spatial</b>			
<b>rho</b>	0.376*** (0.0754)	0.407*** (0.0679)	0.490*** (0.0844)
lambda			
<b>Variance</b>			
sigma <sub>2_e</sub>	1.703*** (0.139)	1.659*** (0.135)	1.596*** (0.130)
<b>Direktni efekti</b>			
Stopa rasta BDP-a (%)	-0.225*** (0.0273)	-0.213*** (0.0280)	-0.224*** (0.0274)
Inflacija (CPI, %)	0.00379 (0.0549)	0.00116 (0.0558)	-0.0259 (0.0555)
Primarni saldo (% BDP-a)	-0.0321 (0.0271)	-0.00596 (0.0272)	-0.0172 (0.0267)
Javni dug (% BDP-a)	0.0474*** (0.00612)	0.0505*** (0.00605)	0.0472*** (0.00621)
Kratkoročna kamatna stopa (%)	0.739*** (0.123)	0.767*** (0.123)	0.752*** (0.127)

<b>Indirektni efekti</b>			
Stopa rasta BDP-a (%)	0.0804	0.0421	0.155*
	(0.0612)	(0.0551)	(0.0840)
Inflacija (CPI, %)	0.127	0.0561	0.243
	(0.111)	(0.129)	(0.168)
Primarni saldo (% BDP-a)	-0.284***	-0.246***	-0.383***
	(0.0772)	(0.0605)	(0.107)
Javni dug (% BDP-a)	-0.0188	0.00300	-0.0104
	(0.0175)	(0.0126)	(0.0257)
Kratkoročna kamatna stopa (%)	0.0979	0.261	0.0204
	(0.202)	(0.197)	(0.250)
<b>Ukupni efekti</b>			
Stopa rasta BDP-a (%)	-0.144**	-0.171***	-0.0683
	(0.0653)	(0.0610)	(0.0868)
Inflacija (CPI, %)	0.131	0.0573	0.217
	(0.121)	(0.132)	(0.170)
Primarni saldo (% BDP-a)	-0.316***	-0.252***	-0.400***
	(0.0822)	(0.0678)	(0.111)
Javni dug (% BDP-a)	0.0286	0.0535***	0.0368
	(0.0184)	(0.0141)	(0.0256)
Kratkoročna kamatna stopa (%)	0.837***	1.028***	0.772***
	(0.168)	(0.164)	(0.233)
<b>Wx</b>			
Stopa rasta BDP-a (%)	0.138***	0.113***	0.194***
	(0.0443)	(0.0380)	(0.0477)
Inflacija (CPI, %)	0.0818	0.0324	0.142
	(0.0773)	(0.0847)	(0.0945)
Primarni saldo (% BDP-a)	-0.178***	-0.149***	-0.199***
	(0.0564)	(0.0397)	(0.0662)
Javni dug (% BDP-a)	-0.0306**	-0.0188**	-0.0290*
	(0.0129)	(0.00878)	(0.0151)
Kratkoročna kamatna stopa (%)	-0.203	-0.145	-0.349*
	(0.184)	(0.159)	(0.182)
N	306	306	306
r <sup>2</sup>	0.360	0.402	0.392

Izrazi u zagradama su standardne greške.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Jedan od najvažnijih koraka u analizi jest testirati koji od tri prostorna modela (SAR, SDM, SEM) najbolje odgovara izabranim podacima. Pomoću *likelihood-ratio* testa testira se pretpostavku prema kojoj je SAR model uključen u SDM model, odnosno testira se može li se umjesto SDM modela koristiti SAR model. Testiranjem hipoteze  $\theta = 0$  dobiveni rezultati ( $p=0.000$ ) sugeriraju odbacivanje  $H_0$  hipoteze, odnosno sugeriraju korištenje SDM modela. Sljedeće što se testira je hipoteza  $\theta = -\rho\beta$  na temelju koje se bira između SEM i SDM modela. Dobiveni rezultati sugeriraju odbacivanje  $H_0$  hipoteze te shodno tome, sugeriraju korištenje SDM modela. Stoga se, u nastavku analize, interpretiraju rezultati dobiveni u SDM prostornom modelu. Dodatno, iz Tablice 4 je vidljivo kako je vrijednost  $\rho$  (*Spatial rho*) pozitivna i statistički signifikantna za sva tri transmisijska kanala te time sugerira da se prilikom interpretacija rezultata vodi računa o prostornom utjecaju susjednih zemalja. Naime, kad je riječ o bilateralnom kanalu 37.6% utjecaja ( $\rho = 0.376$ ) otpada na indirektnu, *spillover* efekte, a u slučaju informacijskog i gografskog kanala 40.7%. odnosno 49.0% utjecaja ( $\rho = 0.407$  i  $\rho = 0.490$ ).

S obzirom da su dijagnostički testovi sugerirali korištenje SDM modela, Tablica 4 prikazuje upravo te rezultate za svaki od odabrana tri transmisivna kanala. U prvom dijelu analize, „*Glavna analiza*“ ispitivao se utjecaj seta nezavisnih varijabli na zavisnu varijablu prinosa na državne obveznice, pritom ne uzimajući u obzir ni jednu prostornu matricu. Rezultati Tablice 4 sugeriraju da je utjecaj stope rasta BDP-a, javnog duga i kratkoročne kamatne stope statistički signifikantan na svim razinama signifikantnosti. Preciznije, utjecaj javnog duga i kratkoročne kamatne stope na prinose na državne obveznice je pozitivan, dok je utjecaj stope rasta negativan. Navedeni rezultati su u skladu s očekivanjima. Preostale varijable, inflacija i primarni saldo nisu signifikantni ni na jednoj razini signifikantnosti.

Rezultati iz Tablice 4, kad se u obzir uzme prostorne matrice bilateralnog kanala, sugeriraju da primarni saldo ima negativan utjecaj na prinose na državne obveznice i da je signifikantan na svim razinama. Preciznije, porast primarnog deficita za 1 postotni bod povećava prinose na državne obveznice za ukupno 31.6 baznih bodova, od čega se 3.21 bazna boda odnose na direktne efekte koji u ovom slučaju nisu signifikantni, a preostalih 28.4 bazna boda se odnose na indirektne efekte koji su signifikantni. Kad je riječ o preostala dva transmisivna kanala, rezultati koji su statistički signifikantni također sugeriraju negativan utjecaj primarnog salda na prinose na državne obveznice. Naime, u slučaju informacijskog kanala, porast primarnog deficita za 1 postotni bod povećava prinose na državne obveznice za ukupno 25.2 bazna boda, s tim da se 2.37% utjecaja na direktne efekte koji nisu statistički signifikantni, a 97.6% ukupnog utjecaja se odnosi na indirektne efekte koji su statistički signifikantni. Također, u slučaju geografskog kanala, porast primarnog deficita za 1 postotni bod povećava prinose na državne obveznice za ukupno 40.0 baznih bodova. 38.3 bazna boda se odnose na indirektne efekte koji su statistički signifikantni, a preostalih 1.72 bazna boda na direktne koji nisu statistički signifikantni. Kad je riječ o javnom dugu, njegova signifikantnost je potvrđena u analizi informacijskog kanala. Porast javnog duga za 1 postotni bod povećava prinose na državne obveznice za ukupno 5.35 baznih bodova. 94.39% utjecaja se odnosi na direktne efekte, a preostalih 5.61% na indirektne efekte koji nisu statistički značajni.

Na kraju analize prostornih matrica primjećuju se razlike u vrijednostima procijenjenih koeficijenata i vrijednosti direktnih efekata varijabli. Te razlike se pripisuju *feedback* efektu koji je posljedica postojanja endogenog interakcijskog efekta. Primjerice, kad je riječ o bilateralnom kanalu direktni efekt javnog duga (izabran jer je statistički signifikantan na svim razinama) iznosi 0.0474 bazna boda, a procijenjeni koeficijent iznosi 0.0487 baznih bodova. Vrijednost *feedback* efekta jednaka je razlici između direktnog efekta i procijenjenog koeficijenta te u ovom slučaju iznosi -0.0013. Prema tome, vrijednost *feedback* efekta odgovara 2.74% procijenjenog koeficijenta primarnog salda.

## ZAKLJUČAK

Ovaj rad analizira utjecaj fiskalnih neravnoteža, javnog duga i primarnog salda u zemljama EMU-a u razdoblju od 2002. do 2018. godine. Do sada su radovi uglavnom ispitivali utjecaj i kanale kojima fiskalne neravnoteže utječu na dugoročne kamatne stope u jednoj zemlji, pritom ne vodeći računa o tome da se jedan dio tog utjecaja pripisuje utjecaju fiskalnih neravnoteža susjednih zemalja. Kako bi se takav nedostatak izbjegao, ovaj rad u svojoj analizi koristi tehnike prostorne ekonometrije, kojom se promatra ovisnost između zemalja uzimajući u obzir njihovu geografsku blizinu.

Rezultati dobiveni iz analize koja se temelji na prostornim zavisnostima daju odgovor na pitanje koje se postavilo na samom početku rada. Naime, rezultati sugeriraju da prinosi na državne obveznice jedne zemlje nisu pogođene samo njezinim fiskalnim neravnotežama, već na njihovu visinu utječu fiskal-

ne neravnoteže ostalih zemalja. Isto tako potvrđuje pretpostavku da susjedna međupovezanost utječe na visinu samog utjecaja, odnosno efekt prelijevanja je veći između zemalja koje su geografski blizu.

Što se tiče samog direktnog efekta, kod sva tri kanala (bilateralni, informacijski i geografski) potvrđuje se signifikantnost javnog duga, stope rasta i kratkoročne kamatne stope te su rezultati u skladu s očekivanjima. Naime, porast javnog duga za 1 postotni bod povećava prinose na državne obveznice za 4.72 – 5.05 baznih bodova (ovisno o kojem kanalu je riječ).

Rezultati su više-manje u skladu s rezultatima drugih radova, a eventualna odstupanja treba pripisati drugačijem izboru uzorka kao i metodama analize. Direktni utjecaj je dosta veći nego kod rada [11] gdje na direktne utjecaje otpada svega 2.5 baznih bodova kao i kod rada [9] gdje porast javnog duga utječe na rast dugoročnih kamatnih stopa za 2 bazna boda. Također, veći je i od utjecaja pronađenog u radu [3] i [12], [18]. Kao potencijalno objašnjenje većeg utjecaja može se navesti veća ekonomska i financijska integracija zemalja EMU. S druge strane, u odnosu na rad [19] koji su istraživali taj utjecaj na uzorku EMU zemalja i došli do rezultata od 43 bazna boda, utjecaj je vidljivo manji. Međutim, dobiveni rezultati se podudaraju s rezultatima u radu [5] koji pronalaze da porast udjela javnog duga za 1 postotni bod povećava prinose na državne obveznice za 5 baznih bodova.

Kad je riječ o indirektnim, odnosno *spillover* efektima, rezultati kod sva tri kanala sugeriraju njihovu važnost. Njihova prisutnost implicira da fiskalne promjene, kako u jednoj zemlji, tako i na cijelom području EMU, imaju veliki utjecaj na ekonomsku situaciju u susjednoj zemlji. Posebno se ističe utjecaj primarnog salda, gdje porast primarnog deficita u susjednim zemljama za 1 postotni bod utječe na rast prinosa na državne obveznice susjedne zemlje u iznosu 24.6 – 38.3 bazna boda. Takav rezultat sugerira kako se potencijalni problemi financiranja u jednoj zemlji lako prenose na drugu zemlju. Najveći utjecaj je primijećen u analizi geografskog kanala. Što su zemlje bliže jedna drugoj (geografski kanal) moguć je veći volumen trgovine (bilateralni kanal) uslijed smanjenja transakcijskih troškova te je logično za pretpostaviti da će se fiskalne neravnoteže njihovih susjeda prelijevati na njih same.

Konačno, ova analiza je potvrdila da buduća istraživanja ovakve tematike trebaju u obzir uzeti i prostorne zavisnosti između jedinica jer takvi modeli daju u potpunosti točne i konzistentne rezultate, odnosno procjenu parametara čine učinkovitijom.

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**KOMPLEMENTARNOST  
USTAVNOPRAVNIH I DRUŠTVENIH ODREDNICA  
POREZNE PRAVEDNOSTI U REPUBLICI HRVATSKOJ**

**COMPLEMENTARITY  
OF CONSTITUTIONAL AND SOCIAL DETERMINATIONS  
OF TAX JUSTICE IN THE REPUBLIC OF CROATIA**

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DOI:

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**Sažetak:** *Porezna pravednost kao pranačelo koje prati evoluciju poreznog sustava od njegova rudimentarnog oblička do suvremenosti postavlja apstraktan zahtjev pred nositelje zakonodavne vlasti prilikom uređivanja fiskalnog sustava. Ustav Republike Hrvatske, a tako i većina suvremenih ustava, utvrđuje minimalne granice zakonodavcu prilikom propisivanja poreza s ciljem ostvarenja pravednosti u oporezivanju. Suzdržana ustavnosudska kontrola poreznih zakona treba predstavljati branu flagrantnim kršenjima ustavnih načela oporezivanja te dati sadržaj apstraktnom načelu porezne pravednosti. S druge strane, sentiment javnosti određuje koliku razinu pravednosti, iznad one minimalne (zajamčene ustavom), određeno društvo želi postići. Time stupanj društvene svijesti o poželjnoj razini porezne pravednosti, izražen kroz načelo demokracije, dopunjuje ustavni minimum pravednog poreznog sustava. Dok potonji predstavlja trajno jamstvo od pretjeranog presizanja javnih vlasti u imovinu građana, prvi je prilagodljiv promijenjenim uvjetima i zahtjevima vremena.*

**Ključne riječi:** *Porezna pravednost, progresivni porezni sustav, Ustav Republike Hrvatske, Ustavni sud Republike Hrvatske.*

**Abstract:** *Principle of tax equity follows the evolution of tax system since its rudimentary form up to this day, and becomes an abstract condition for creators of fiscal policy. The Constitution of the Republic of Croatia, in accordance with the majority of contemporary constitutions, sets elementary limits to the legislative authority, aiming to achieve equity in taxation. Constrained judicial control of constitutionality of tax acts represents a protection from flagrant violations of constitutional principles of taxation, and gives a meaning to the abstract nature of tax equity. On the other side, public sentiment determines which level of equity, above elementary (guaranteed by the constitution), society wants to achieve. Such public agreement about wanted degree of tax equity, expressed through the principle of democracy, complements constitutional minimal standards of fair tax system. While the latter represents permanent protection from excessive taxation, the first is elastic and adaptable to the changing conditions.*

**Keywords:** *Tax equity, progressive tax system, Constitution of the Republic of Croatia, Constitutional Court of the Republic of Croatia.*

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## 1. UVOD

Povijesni razvoj poreza praćen je zahtjevom za ostvarenjem pravednosti u oporezivanju te je načelo porezne pravednosti moguće okarakterizirati pranačelom (Jelčić, Jelčić, 1997, str. 71) koje prethodi izgradnji suvremenih poreznih sustava. Ono u suvremenoj „poreznoj državi“ nije

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napušteno, naprotiv, evolucijom socijalne države početkom druge polovice 20. stoljeća izdiže se kao temeljno načelo prihodovne strane suvremenog socijalno-osjetljivog proračuna. Usprkos tome, težište javnog interesa u suvremenosti se premješta te interes javnosti za ravnomjernim raspoređivanjem poreznog tereta uzmiče pred zanimanjem za ciljeve i načine potrošnje oporezivanjem ubranih sredstava. Takva promjena u javnoj percepciji sustava javnih financija posljedica je složenosti i apstraktnosti poreznog sustava (Perić, Jerković, 2014, str. 823; Lončarić-Horvat, 2010, str. 194).

Valja istaknuti kako odgovor na pitanje je li suvremena porezna država ujedno i socijalna, podjednako ovisi o načinu ubiranja sredstava financiranja socijalnih djelatnosti, koliko i o svrha njihova trošenja. Stoga je ispravno tvrditi kako je ostvarenje porezne pravednosti temeljni preduvjet realizaciji funkcija socijalne države (Kuzelj, 2018). Pritom treba imati na umu kako značenje porezne pravednosti nije univerzalno određeno, već je determinirano vremenskom i prostornom dimenzijom te položajem društvene grupe s čijeg se gledišta promatra (Jelčić, 1995, str. 11). Samim time pravednost u oporezivanju ne počiva na teorijskim konceptima optimalnog poreznog opterećenja, već je rezultat kulturnog i vrijednosnog društvenog sustava neke države u pojedinom povijesnom trenutku tj. proizvod određene socijalne situacije (Perić, Szilovics, 2012, str. 251).

Nastavno na navedeno, porezni sustav nije determiniran isključivo većinskom voljom građana, već je pri kreiranju poreznog sustava zakonodavac *ipso facto* dužan voditi računa o potencijalnom međusobnom sukobu pojedinih poreznih načela, npr. porezne pravednosti te jednostavnosti i jeftinoće ubiranja poreza (Kesner-Škreb, Kuliš, 2010, str. 12). Pritom ne smije zauzeti isključivi stav predanosti ijednom načelu ili skupini načela, s obzirom na opasnost da takvo opredjeljenje negira druge legitimne ciljeve, osim onih sadržanih u propagiranom načelu.

Iz tog razloga ustavi suvremenih demokratskih i socijalnih država *eksplicite* konstitucionaliziraju načela na kojima se porezni sustav ima temeljiti. Ustav Republike Hrvatske (u nastavku: URH) postavlja jasne granice zakonodavčeve diskrecije pri definiranju hrvatskog poreznog sustava. Iako praksa Ustavnog suda Republike Hrvatske (u nastavku: USRH) potvrđuje kako se ne radi tek o programatskim smjernicama zakonodavcu, već o obvezujućim ustavnim načelima podložnim (suzdržanom) ustavnosudskom nadzoru, pojedini primjeri odluka ukazuju na pretjeranu pasivnost i suzdržanost USRH pri ocjeni ustavnosti poreznih zakona. U nastavku će se prikazati ustavne granice fiskalnog suvereniteta zakonodavne vlasti te će se, prilikom iznalaženja sadržaja ustavnog aksioma pravednosti u oporezivanju, ukazati na određene prijeporne primjere hrvatske ustavnosudske prakse. Naposljetku, u zaključnim će se razmatranjima ponuditi viđenje komplementarnosti ustavnih (minimalnih) granica zakonodavne slobode definiranja fiskalne politike te društvenih zahtjeva za pravednim poreznim sustavom kao dvije poluge ograničavanja zakonodavne diskrecije.

## 2. OSTVARENJE USTAVNOG AKSIOMA POREZNE PRAVEDNOSTI

Usprkos značajnoj normativnoj slobodi zakonodavca pri uređivanju sustava javnih financija, smjerajući zaštitu privatnog interesa (prava vlasništva) od prekomjernog opterećenja i ograničavanja, URH postavlja jasne (iako minimalne) granice fiskalnom suverenitetu zakonodavne vlasti, onemogućavajući apsolutni primat javnog nad privatnim interesom tj. sprječavajući da se široka margina zakonodavne diskrecije u poreznim pitanjima pretvori u samovolju i arbitrarnost nositelja fiskalne politike (Arlović, 2018, str. 92-94). Tako je USRH (2007, t. 8; također vidjeti:

Cindori, Kuzelj, 2018, str. 588), povezujući ustavno jamstvo prava vlasništva (URH, čl. 48.) s ustavnim načelima oporezivanja (URH, čl. 51.), potvrdio zabranu penalnog (kaznenog) učinka poreza, pri čemu bi svrha poreza bila prisiljavanje vlasnika da se protivno svojim interesima i mogućnostima na određeni način ili u određene svrhe koristi svojim vlasništvom (nekorištenom poduzetničkom nekretninom, neizgrađenim građevinskim zemljištem i neobrađenim obradivim poljoprivrednim zemljištem).

URH granice zakonodavne diskrecije u vođenju fiskalne politike općenito temelji na ustavotvorčevom opredjeljenju konceptu socijalne države (čl. 1. st. 1.), načelima socijalne pravde i jednakosti kao jednim od najviših vrednota ustavnoga poretka i temelju tumačenja Ustava (čl. 3.), jednakosti pred zakonom i zabrani diskriminacije (čl. 14.) te načelu razmjernosti pri ograničavanju ljudskih prava i sloboda (čl. 16.). Naposljetku, granice fiskalnog suvereniteta legislative dodatno su konkretizirane obvezom sviju na pridonošenje podmirenju javnih izdataka sukladno gospodarskim mogućnostima te zasnivanjem hrvatskog poreznog sustava na načelima jednakosti i pravednosti (čl. 51.).

Iz ustavnih načela oporezivanja sadržanih u čl. 51. proizlazi opredijeljenost hrvatskog Ustava socijalnim vrijednostima, s obzirom da se ustavotvorac odlučio *eksplicite* konstitucionalizirati isključivo socijalno-politička načela oporezivanja. Takvo rješenje ne negira ostala načela oporezivanja, ali ukazuje na potrebu da se u dvojbi prilikom (pr)ocjene pojedinog poreza te poreznog sustava u cjelini, prednost da socijalnom značaju poreza, čak i pred fiskalnim zahtjevom punjenja proračuna. Iz navedenoga proizlazi zahtjev za univerzalnošću porezne obveze te vertikalnom pravednošću pri oporezivanju (čl. 51. st. 1.), dok jednakost u oporezivanju zahtijeva jednako postupanje s jednakima tj. ostvarenje horizontalne pravednosti (čl. 51. st. 2.). Dodatno isticanje načela porezne pravednosti valja smatrati proklamativnim (Arbutina, 2012, str. 1286-1287). Bejaković (2012, str. 93) ističe kako, za razliku od široko prihvaćenog načela horizontalne pravednosti, načelo vertikalne pravednosti, kao ideja većeg proporcionalnog opterećenja bogatih u svrhu poboljšanja socijalnog položaja siromašnih i unaprjeđenja društvene kohezije, proizlazi iz subjektivnih društvenih vrijednosti.

Osnovanosti takve tvrdnje svjedoči činjenica da je USRH (2009a) odlučujući o suglasnosti s ustavom zakonskih odredbi o dobrovoljnom i/ili prisilnom prelasku određenih kategorija poreznih obveznika iz (višestopnog) sustava poreza na dohodak u (jednostopni) sustav poreza na dobit, pri čemu je stopa potonjeg bila niža od one kojom bi navedene kategorije obveznika bile obuhvaćene u sustavu oporezivanja dohotka (uz koji se vezuje i obveza plaćanja prireza), zauzeo stav pretjerane pasivnosti prema parlamentu. Ističući ustavnu samostalnost zakonodavca ustvrdio je kako predmetom odlučivanja ne može biti „propisivanje pojedinih vrsta poreza, kruga poreznih obveznika, visine poreznih stopa ni poreznih olakšica“ (USRH, 2009a, t. 8.) ne prihvaćajući prijedlog za ocjenom ustavnosti. Usprkos mogućnosti načelnog slaganja s tako iznesenom tvrdnjom, ostaje činjenica da se u predmetnom slučaju nije radilo o pitanjima zakonodavne slobode pri kreiranju fiskalne politike, već o flagrantnom kršenju načela plaćanja poreza sukladno gospodarskim mogućnostima, zahtijeva za ravnomjernim snošenjem poreznog opterećenja te porezne pravednosti kao ustavnog aksioma hrvatskog poreznopravnog sustava (Jelčić, 2007, str. 3).

Nadalje, usprkos doktrinarnom slaganju kako se jedino „progresivnim načinom oporezivanja može postići horizontalna i verikalna pravednost u oporezivanju...“ (Jerković, 2017, str. 236), iz hrvatske ustavnosudske prakse o poreznim pitanjima ne proizlazi zahtjev za progresivnim

stopama izravnih poreza. USRH (2009b, t. 15.3.) odlučujući o suglasnosti s Ustavom tzv. „kriznoga poreza“ odbio je odlučivati o stvarnoj progresivnosti kriznoga poreza temeljenog na dvije stope, ističući kako bi o tome mogao odlučivati „samo pod pretpostavkom da je ustavotvorac izrijeком propisao da porezni sustav Republike Hrvatske mora biti u skladu s načelom progresivnosti“. Pritom navodi primjere Ustava Italije (čl. 53. st. 2.) te Ustava Španjolske (čl. 31. st. 1.) koji *eksplicite* predviđaju progresivno oporezivanje. USRH ističe kako, sve dok istovjetna odredba ne bude izrijeком konstitucionalizirana, ima ustavnu dužnost suzdržati se „u procjeni valjanosti odabira vrste porezne stope vezane uz pojedini porezni oblik.“

Takvo rezoniranje ne može podnijeti teret logičkih argumenata sadržanih u ustavnoj dužnosti pridonosenja podmirenju javnih potreba sukladno ekonomskoj snazi te ustavnoj zapovijedi zakonodavcu da porezni sustav utemelji na načelu pravednosti. Iako je, u skladu sa *supra* navedenim, načelo porezne pravednosti proklamativno, njegov sadržaj ostvaren je ispunjavanjem ostalih ustavnih postulata poreznog sustava navedenih u čl. 51. URH. Ne treba posezati za pretjeranim ustavnosudskim aktivizmom kako bi se izveo zaključak da je zahtjev za progresivnim poreznim sustavom *implicit*e sadržan u navedenim načelima.

Valja istaknuti kako je zahtjev ostvarenja porezne pravednosti primjena progresivnog oporezivanja, a ne progresivne stope (Jelčić, 2003b, str. 4), s obzirom da niti progresivna porezna stopa izravnih poreza (poglavito poreza na dohodak) ne jamči nužno ostvarenje pravednosti, već ista ovisi o broju, vrsti i razmjeru primijenjenih stopa. Ipak, neosporna je važnost progresivnog oporezivanja dohotka radi ispravljanja regresivnog učinka neizravnih poreza, osobito poreza na dodanu vrijednost (PDV), čija primjena rezultira postotno većim opterećenjem osoba slabije ekonomske snage (Cindori, Pilipović, Kalčić, 2015, str. 18). Posredni porezi zastupljeni su u sustavima ustavom definiranih socijalnih država, iako su po svojoj naravi neprikladni ostvarenju njezinih načela (Lončarić-Horvat, 1995, str. 115), upravo zbog mogućnosti ostvarenja tzv. kompenzatorne progresije (v. Jelčić, Lončarić-Horvat, Šimović, Arbutina, Mijatović, 2008, str. 153) putem poreza na dohodak.

Usprkos tome, s obzirom na navedeni stav USRH, nije nezamisliva mogućnost da u Republici Hrvatskoj bude uveden proporcionalni porez na dohodak. Takva se odluka ne bi mogla ocijeniti razboritom, čemu u prilog govori da niti u SAD-u, državi iz koje je u drugoj polovici prošloga stoljeća potekla ideja proporcionalnog (jednostopnog) oporezivanja dohotka, takav model nikad nije zaživio (Jelčić, 2004, str. 71). Napoljetku, opravdanosti zahtjeva za jednostavnošću i preglednošću poreznog sustava ne smije se odgovoriti ozakonjenjem eklatantno nesocijalnih mjera (Jelčić, 2006, str. 65). Iako je u kratkom razdoblju hrvatske samostalnosti bilo zahtjeva za uvođenjem proporcionalnog poreza na dohodak, hrvatski se zakonodavac nije odlučio za potpuno ukidanje progresivnih stopa, već je posljednjih desetak godina nekoliko puta smanjivao njihov broj i mijenjao visinu (Kuzelj, 2018, str. 105). Tako se danas porez na dohodak plaća prema godišnjoj stopi od 24 % na poreznu osnovicu do visine od 360.000 kuna, dok se porez na dio osnovice preko navedenog iznosa metodom razlomljene progresije plaća po stopi od 36 % (čl. 19. Zakona o porezu na dohodak, izmijenjen čl. 8. Zakona o izmjenama i dopunama Zakona o porezu na dohodak). S obzirom na, za hrvatske prilike, izuzetno visoko postavljen prag za primjenu više stope poreza na dohodak, moguće je ustvrditi kako je u Republici Hrvatskoj *de facto* ozakonjeno proporcionalno oporezivanje dohotka.

Valja zaključiti kako, usprkos formalno jasno definiranim granicama koje URH postavlja nositeljima fiskalne politike, USRH u svojoj praksi odbija članku 51. udahnuti značaj kojim bi

izrazio puninu njegova sadržaja. Umjesto toga, pozivajući se na praksu njemačkog Saveznog ustavnog suda, ističe zadaću „ustavnih sudova da provjeravaju samo poštovanje tih vanjskih granica zakonodavčeve slobode (zabrana proizvoljnosti), ali ne je li zakonodavac u konkretnom slučaju pronašao najsvrsishodnije, najracionalnije i najpravednije rješenje.“ (USRH, 2009b, t. 15.4.). S tom se tvrdnjom nedvojbeno valja složiti, primjećujući kako se u jednom od *supra* navedenih primjera (USRH, 2009a) u pitanje nije dovodila svrhovitost i racionalnost zakonodavčeva izbora, već je mogućnost/obveza prelaska iz sustava poreza na dohodak u sustav poreza na dobit predstavljala upravo krajnji izraz proizvoljnosti zakonodavca, bez legitimnog cilja kojim bi takvo postupanje bilo opravdano. U drugom primjeru moguće je shvatiti odabrani stav pasivnosti USRH u pogledu (pr)ocjene progresivnosti poreza, iako valja izraziti nadanje kako će u budućnosti teorijsko slaganje financijske znanosti o progresivnom oporezivanju kao *sine qua non* načela vertikalne pravednosti postati sastavnim djelom hrvatske ustavnosudske stvarnosti.

### 3. ZAKLJUČAK

U suvremenoj stvarnosti poreznih sustava demokratskih i socijalnih država postavlja se zahtjev za poštovanjem prava na dostojanstvo poreznih obveznika, što se postiže ponajprije izuzimanjem osnovnog egzistencijalnog minimuma iz porezne osnovice te dovođenjem ukupnog tereta poreza u razumne okvire (Lončarić-Horvat, 1998, str. 121). Dok se uvažavanje osnovnog egzistencijalnog minimuma i njegovo izuzimanje od porezne obveze može smatrati jednom od temeljnih sastavnica načela porezne pravednosti, pitanje krajnje granice visine poreznog opterećenja je društveno i vremenski determinirano. Ne postoji teorijsko slaganje o poželjnoj visini poreza ili najvišoj dozvoljenoj stopi, već je odluka o točki na kojoj se visina poreza ima smatrati pretjeranom prepuštena sentimentu građana u pojedinom vremenskom trenutku, odluci nositelja vlasti na temelju procjene poreznog kapaciteta poreznih obveznika te u skladu s prihvaćenom zadaćom države na socio-ekonomskom polju (Jelčić, 1997, str. 58).

Pritom valja naglasiti kako, za razliku od opisanog „previsokog“ poreznog opterećenja, koje sukladno praksi USRH ne bi bilo protuustavno jer se radi o pitanju svrsishodnosti i racionalnosti pojedinog poreza, iz URH nedvojbeno proizlazi zabrana konfiskatornog učinka poreza tj. takvog čija bi visina prešla granicu pridonosa javnim potrebama i zašla u sferu zakonske konfiskacije imovine obveznika (Cindori, Kuzelj, 2018, str. 586). Pravednost i socijalnost svakog poreza koji se ne može okarakterizirati eklatantno konfiskatornim prepuštena je ocjeni „sa stajališta društvenog konsenzusa o preraspodjeli poreznog tereta“ (Lončarić-Horvat, 2010, str. 180) te namjenskom trošenju tako prikupljenih sredstava.

Nužno je istaknuti kako transparentnost samog poreznog sustava uvelike utječe na percepciju građana prema plaćanju poreza (Jelčić, 2003a, str. 80). Također, visoka stopa porezne evazije kao posljedica neučinkovitosti poreznog sustava stvara osjećaj nepravednosti kod poreznih obveznika koji uredno podmiruju svoje obveze (OECD, 2014, str. 31). Pritom visoko porezno opterećenje i previsoke progresivne stope djeluju poticajno na iznalaženje legalnih i ilegalnih načina izbjegavanja ili umanjenja porezne obveze (Ercsey, Jerković, 2012, str. 268).

Naposljetku, valja naglasiti važnost ustavnog koncepta socijalne države i načela socijalne pravde, čiji je normativni značaj kao obveze zakonodavca na uspostavljanje socijalno pravednoga poretka potvrđen u praksi USRH (Cindori, Kuzelj, 2019, str. 834-835). Uspostavljanje pravednog poreznog sustava neodvojivo je od ocjene pravednosti sustava javnih financija te općenito socio-ekonomskih aktivnosti države. Redistributivna uloga države posebno je naglašena u cilju

kreiranja mogućnosti stvarne demokratske participacije sviju građana (Kuzelj, 2019) te je osnovana Jelčićeva (2003a, str. 80) tvrdnja kako se „Hrvatska ne može lišiti mogućnosti korištenja poreza kao učinkovitih instrumenata nefiskalne politike.“

Zaključno, URH konstitucionalizirajući socijalno-politička načela oporezivanja (čl. 51.) *eksplicite* uspostavlja minimalne granice legislativnoj diskreciji pri kreiranju poreznog sustava, istovremeno obvezujući zakonodavca na ostvarenje socijalne pravednosti i jednakosti (čl. 3.) kao sastavnog dijela ustavnog koncepta socijalne države (čl. 1. st. 1.). Pravedan i socijalno osjetljiv porezni sustav sastavni je dio takvoga koncepta. USRH kroz ocjenu ustavnosti poreznih propisa dužan je tumačiti udovoljavaju li isti navedenim minimalnim zahtjevima porezne pravednosti. Izvan toga, ocjena svrsishodnosti, racionalnosti te ostvarenja višeg stupnja porezne pravednosti od ustavnog minimuma prepuštena je građanima koji mogu javni dojam o tim pitanjima pretočiti u glasove za ili protiv određenih javnih (i poreznih) politika. Time načelo demokracije ne stoji u suprotnosti načelu socijalnosti i porezne (redistributivne) pravednosti, već služi ostvarenju komplementarnosti ustavnopravnog i društvenog zahtjeva za ostvarenjem pravednosti u oporezivanju.

## ZAHVALA

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**UTJECAJ KANALA DISTRIBUCIJE  
NA PROFITABILNOST OSIGURAVAJUĆIH DRUŠTAVA  
U REPUBLICI HRVATSKOJ**

**THE IMPACT OF THE DISTRIBUTION CHANNELS  
ON THE PROFITABILITY OF INSURANCE COMPANIES  
IN THE REPUBLIC OF CROATIA**

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**Sažetak:** *Kako bi osiguravajuća društva bila u mogućnosti podmiriti obveze iz osiguranja, odnosno isplatiti štetu svojim osiguranicima, potrebno je da njihovo poslovanje bude profitabilno. Stoga u ovom radu autori istražuju utjecaj kanala distribucije na profitabilnost osiguravajućih društava u Republici Hrvatskoj u razdoblju od 2014. do 2017. godine. Pomoću modela linearne regresije i Pearsonovog koeficijenta korelacije izražena je jačina međuovisnosti između analiziranih varijabli. Prema udjelima pojedinih distribucijskih kanala osiguravajućih društava vodeću poziciju zauzimaju interni prodajni alati, a na drugom i trećem mjestu su agencije i banko kanal distribucije koji predstavlja veliki udio životnih osiguranja. Kod životnih osiguranja izražena je jača povezanost banko kanala prodaje, dok kod neživotnih osiguranja jaku vezu pokazuju interni kanal distribucije te agencijski kanal distribucije koji zauzimaju najveći dio te time utječu na odnos bruto premije poduzeća.*

**Ključne riječi:** *kanali distribucije, osiguravajuća društva, profitabilnost.*

**Abstract:** *In order for insurance companies to be able to settle their insurance liabilities, i.e. to pay damages to their policyholders, it is necessary for their business to be profitable. Therefore, in this paper, the authors investigate the impact of distribution channels on the profitability of insurance companies in the Republic of Croatia in period from 2014. to 2017. Using the linear regression model and Pearson's correlation coefficient, the strength of the interdependence between the analyzed variables was expressed. According to the shares of individual distribution channels of insurance companies, internal sales tools occupy a leading position, while at the second and third place are agencies and bank distribution channel which represents a large share of life insurance. With life insurance, a stronger link between bank sales channels is pronounced, while with non-life insurance, a strong link is shown by the internal distribution channel and the agency distribution channel, which occupy the largest part and thus affect the company's gross premium yield.*

**Keywords:** *distribution channels, insurance companies, profitability.*

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## 1. UVOD

Društva za osiguranje pružaju ekonomsku zaštitu pojedincima kao i pravnim subjektima na način da im prodaju police osiguranja za koje naplaćuju premiju osiguranja te iz tako prikupljenih sredstava, uvažujući načela društveno odgovornog poslovanja, kreiraju portfelj ži-

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votnih i neživotnih osiguranja. Prikupljena sredstva koriste za ulaganja u različite financijske instrumente na tržištima kapitala pri čemu nastoje optimizirati investicijski portfelj kako bi osigurali ispunjenje obveza proizašlih iz sklopljenih polica osiguranja te ispunili očekivanja dioničara o povećanju vrijednosti njihovih dionica. Kanali distribucije u osiguranju su načini na koje se proizvodi osiguranja prodaju kupecima, a predmet ovog rada je prikaz povezanosti kanala distribucije i profitabilnosti društava za osiguranje u Republici Hrvatskoj. Kako je bruto premiju kao osnovni početni korak profita društva za osiguranje moguće pribaviti iz nekoliko izvora, cilj rada je prikazati koliko pojedini distribucijski kanal doprinosi i utječe na profitabilnost.

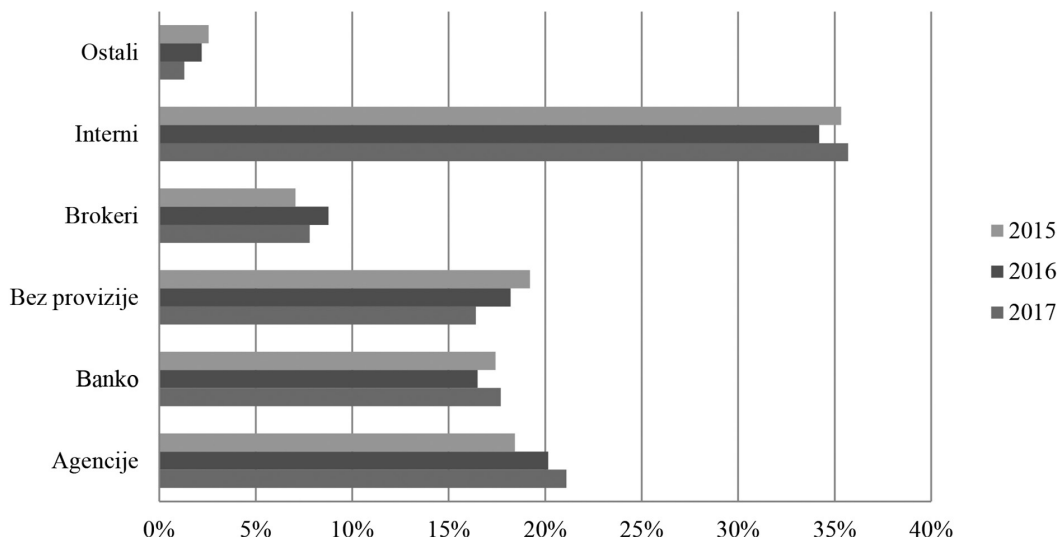
## **2. KANALI DISTRIBUCIJE OSIGURAVAJUĆIH DRUŠTAVA NA HRVATSKOM TRŽIŠTU**

Prema Rafaju (2009), 'Osiguranje je prenošenje rizika na koje nalazimo u našem okruženju s pojedinca na osiguratelja (društvo za osiguranje) sklapanjem ugovora o osiguranju' (str. 10). Djelatnost osiguranja obavlja se zaključivanjem ugovora o osiguranju i izvršavanjem određenih preuzetih obveza (Bjelić, 2002). Prema Klasić (2003) glavna zadaća osiguravajućih društava jest uredno podmirenje obveza iz osiguranja, odnosno isplata šteta svojim osiguranicima i jamstvo da će im osigurani rizici biti isplaćeni ako se i kada dogode, na osnovi uplaćenih premija osiguranja za pokriće tih rizika. Na taj se način pojedinac nastoji zaštititi od opasnosti koje mu mogu ugroziti život ili nanijeti štete na imovini pri čemu je osnovna karakteristika tih rizika da su neizvjesni, budući i neovisni od naše volje. Osiguranje je, dakle, kompleksan sustav s dva temeljna obilježja: prijenos rizika od pojedinca na skupinu ili zajednicu rizika, raspodjela gubitaka na sve članove skupine (Ćurak i Jakovčević, 2007, str. 21). Pritom je zadaća osiguravajućih društava i vlastito poslovanje voditi na način koji im jamči likvidnost na kratak rok u svakom trenutku, a što osobito utječe na povjerenje osiguranika i na njihovu psihologiju kada se odlučuju na sklapanje police određene vrste osiguranja (Klasić, 2003). Štoviše, povjerenje pojedinca da će osiguravatelj biti sposoban isplatiti ugovorenu svotu osiguranja presudna je pri izboru osiguravajućega društva s kojim pojedinac sklapa policu životnog osiguranja na rok od deset i više godina (Klasić, 2003). U ovom dijelu analiziraju se udjeli kanala distribucije osiguravajućih društava na tržištu Republike Hrvatske: ukupni udjeli pojedinih kanala industrije osiguranja kao i podjela udjela kanala distribucije prema podjeli osiguranja na životna i neživotna osiguranja. Prodaju svojih proizvoda i usluga društva za osiguranje su vršila preko vlastitih zaposlenika (bez provizije), internih zastupnika, agencija, brokera, bankoosiguranja i ostalih kanala distribucije.

Na grafikonu 1. je prikazano kretanje udjela pojedinih kanala prodaje društava za osiguranje u razdoblju od 2015. do 2017. godine. Ako bi se gledao udjel pojedinih distribucijskih odnosno prodajnih kanala društava za osiguranje na razini bruto zaračunate premije tada vidimo da vodeće mjesto u udjelima nose interni prodajni alati, gdje se udio navedenog distribucijskog kanala povećao u 2017. godini i iznosi preko 35%. Nadalje, drugo i treće mjesto zauzimaju agencije i banko kanal distribucije koji obuhvaća veliki dio životnih osiguranja.

Tržište osiguranja u Republici Hrvatskoj pretežito je orijentirano na tri dominantna kanala distribucije, interni kanal, agencije i bankoosiguranje. Dok bankoosiguranje pretežito obuhvaća područje životnih osiguranja, interni kanal i agencijski kanal distribucije prisutni su kako u životnim osiguranjima, tako i u neživotnim osiguranjima. Navedeno je prisutno na tržištu osiguravajuće industriji u Republici Hrvatskoj. Iz navedenog može se utvrditi da se današnji osiguratelji neće odreći ni jednog prodajnog kanala, jer svaki kanal ima svojih prednosti i nedostataka. Zapravo, svi su kanali potrebni kako bi potencijalni i stvarni osiguranici imali pristup

kvalitetnim pribavljačima koji će savjete i eventualnu realizaciju prilagoditi njihovim željama i mogućnostima. Pri tome, kako ne postoji jednoznačan odgovor na pitanje koji su optimalni prodajni kanali, politiku prodajnih kanala osiguratelji trebaju formirati sukladno istraživanju tržišta i potrebama ciljanih tržišnih segmenata. Ukoliko se kvalitetno ne istraži raznolikost tržišta na kojem se nastupa te ukoliko osiguratelj ne slijedi suvremene trendove, svaki način prodaje osiguranja ubrzo će prestati donositi zadovoljavajuće prihode.

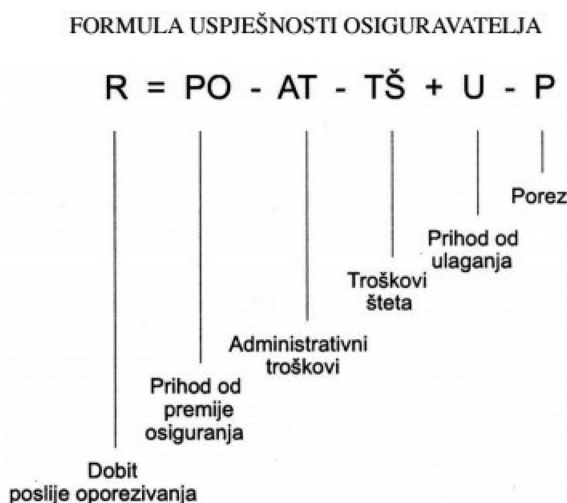


**Grafikon 1.** Distribucijski kanali društava za osiguranje u razdoblju od 2015. do 2017. godine

**Izvor:** Obrada autora prema podacima Hrvatskog ureda za osiguranje, <https://www.huo.hr/hrv/pocetna/1/trziste-osiguranja-u-rh-za-listopad-2018-/653/detalji/>, (05.09.2019)

### 3. PROFITABILNOST DRUŠTVA ZA OSIGURANJE

Tržište osiguranja posluje u iznimno složenim uvjetima iz perspektive regulatora i tržišne utakmice te iz tog razloga ima svoje posebnosti i svoje specifične pokazatelje. Prema (Klasić, 2003) čimbenici koji utječu na rezultat poslovanja u osiguravateljskoj djelatnosti mogu se pokazati definiranjem formule o uspješnosti osiguratelja.



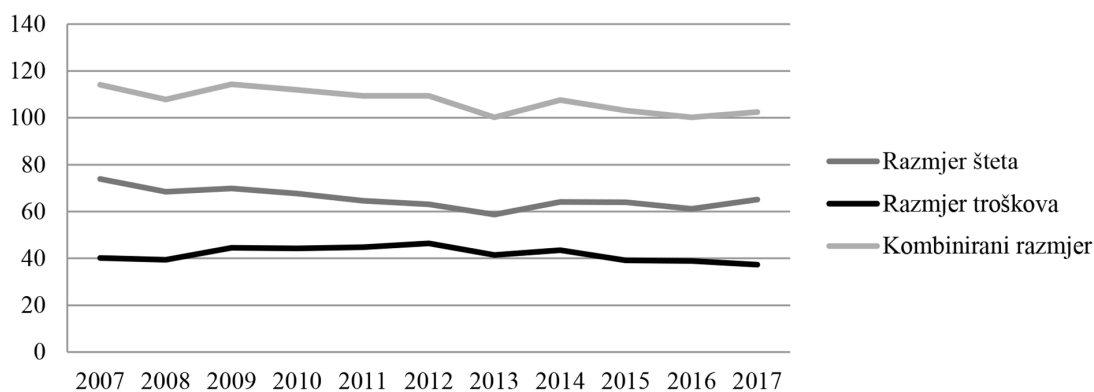
**Slika 1.** Formula uspješnosti osiguratelja

**Izvor:** Klasić, K. (2003). Utjecaj psihologije pojedinca na izbor vrsta osiguranja. *Ekonomski pregled*, 54(7-8), 595-620.

Na slici 1. prikazuje se formula uspješnosti osiguratelja s ciljem ostvarenja što boljeg poslovnog rezultata. Na taj način, osiguravajuće društvo mora povećati prihod od premije osiguranja, smanjiti administrativne troškove i troškove šteta i povećati prihode od ulaganja. Porezne obveze određuje država i osiguravatelj je obavezan redovito ih plaćati.

Prema Žager i sur. (2008), računovodstveni stručnjaci su primijetili posebnost društava za osiguranje te se oblikovao set pokazatelja koji su karakteristični za društva za osiguranje, a isto tako mjere uspješnost samih pokazatelja. U praksi se najčešće koriste pokazatelj razmjer šteta, razmjer troška te kombinirani razmjer. Razmjer šteta računa se kao odnos zbroja likvidiranih šteta, promjena pričuva za štete i promjena ostalih tehničkih pričuva i zarađene premije osiguranja. Za djelatnost osiguranja uobičajeno je da se pokazatelj razmjera šteta kreće u okviru od 50%-70% te da pokazuje tendenciju padanja (Žager i sur., 2008). Razmjer troškova računa se kao odnos zbroja iznosa poslovnih rashoda, ostalih osigurateljno-tehničkih izdataka i zarađene premije. Uobičajeni raspon tog pokazatelja za djelatnost osiguranja iznosi 20% do 30% (Žager i sur., 2008). Ako pokazatelj razmjera šteta ima tendenciju rasta to može značiti da poslovni rashodi rastu brže od zaračunate bruto premije. Nešto viši pokazatelj u odnosu na prosjek industrije uobičajeno ukazuje na nižu operativnu efikasnost poslovanja društva. Kombinirani razmjer računa se kao zbroj pokazatelja razmjera šteta i razmjera troškova (Žager i sur., 2008). Prikazuje koji je rezultat poslovanja prije uključivanja prihoda od ulaganja sredstva. Za osiguravajuće društvo je povoljna situacija kada pokazatelj kombiniranog razmjera ne prelazi 100%. Međutim, moguće je da ako pokazatelji razmjera šteta i razmjera troškova premašuju zarađenu premiju da osiguravajuće društvo ostvaruje pozitivan rezultat na temelju neto prihoda od ulaganja te ostalih prihoda.

Grafikon 2. prikazuje kretanja razmjera šteta, razmjera troška i kombiniranog razmjera za tržište osiguranja u Republici Hrvatskoj u razdoblju od 2007. do 2017. godine. Ono što je bitno je da se po regulatoru, HANFA metodologija izračuna mijenjala od 2015. godine gdje je u usporedbi s metodologijom izračuna za 2014. godinu, u izračun kvote troškova za 2015. i 2016. godinu dodatni ostali osigurateljno-tehnički prihodi.



**Grafikon 2.** Osnovni pokazatelji u osiguranju u Republici Hrvatskoj u razdoblju od 2007. do 2017. godine

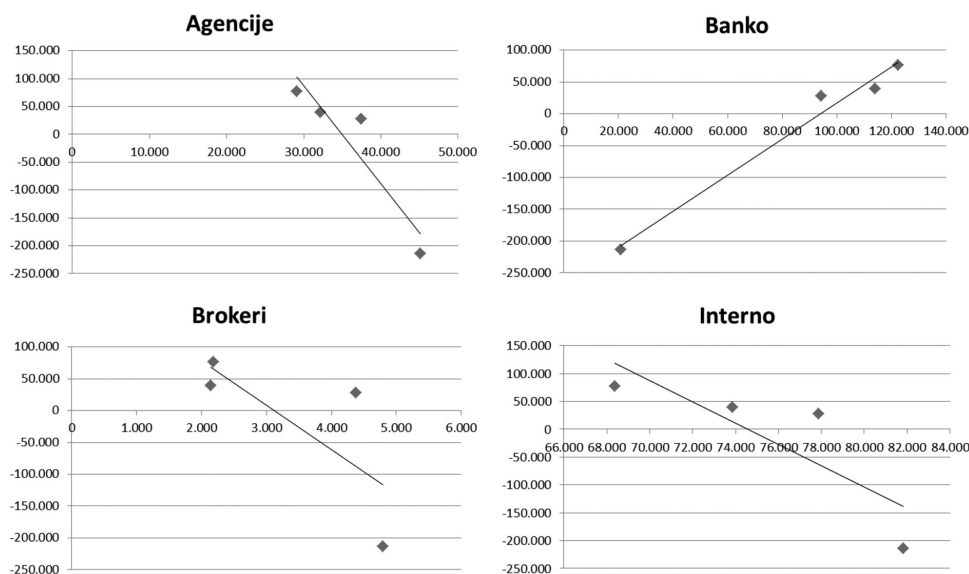
**Izvor:** Obrada autora prema podacima Hrvatskog ureda za osiguranje, <https://www.huo.hr/hrv/pocetna/1/trziste-osiguranja-u-rh-za-listopad-2018-/653/detalji/>, (05.09.2019)

Kada bi se gledao odnos prikazanih podataka u grafikonu 2. tržišta osiguranja Republike Hrvatske sa teorijskim vrijednostima koje su opisane ranije kao željene može se vidjeti kako postoji izvjesni prostor za napretkom iako je tendencija pada pokazatelja do prikazane granice od 100 za kombinirani razmjer. Najbliže navedenoj granici se pristupilo 2013. i 2016. godine kada

je razina kombiniranog razmjera bila 100.2, dok je relativno najlošija godina u promatranom razdoblju bila 2009. godina kada je kombinirani razmjer bio na razini 114.3. Pokazatelje obično promatra se kao nositelje informacija koje su potrebne za upravljanje poslovanjem i razvojem poduzeća. Stoga, pokazatelji se formiraju i računaju radi stvaranja informacijske podloge za donošenje određenih poslovnih odluka. Ovisno o tome koje se odluke žele donositi naglašava se važnost pojedinih vrsta pokazatelja (Bolfek i sur., 2012). Na temelju prikazanog može se utvrditi da se postizanje ciljeva osiguravajućeg poduzeća ne može realizirati bez dobrog upravljanja svim rizicima, bilo osiguranja, operativnih ili ulaganja.

#### 4. ANALIZA POVEZANOSTI KANALA DISTRIBUCIJE I PROFITABILNOSTI NA TEMELJU ODABRANOG OSIGURAVAJUĆEG DRUŠTVA U INDUSTRIJI OSIGURANJA

Podaci korišteni u ovoj analizi prikupljeni su iz dostupnih sekundarnih izvora i odnose se na financijske izvještaje društva za osiguranje u razdoblje od 2014. do 2017. godine. Podatak koji je korišten kao nezavisna varijabla je bruto dobit poduzeća dok su podaci koji su korišteni kao zavisne varijable zaračunate bruto premije prema glavnim tipovima osiguranja u četiri najvažnija kanala prodaje: interni kanal prodaje, brokeri, agencije i bankoosiguranje. Za potrebe korištenja statističke analize u ovom radu koristila se jednostavna linearna regresija, te se nakon analize izradio dijagram, jednadžba, odredila se reprezentativnost modela te se na kraju izradio Pearsonov koeficijent korelacije kako bi se izrazila jačina međuovisnosti između analiziranih varijabli.



**Grafikon 3.** Dijagrami rasipanja sa kanalima distribucije životnih osiguranja u razdoblju od 2014. do 2017. godine

Izvor: Obrada autora

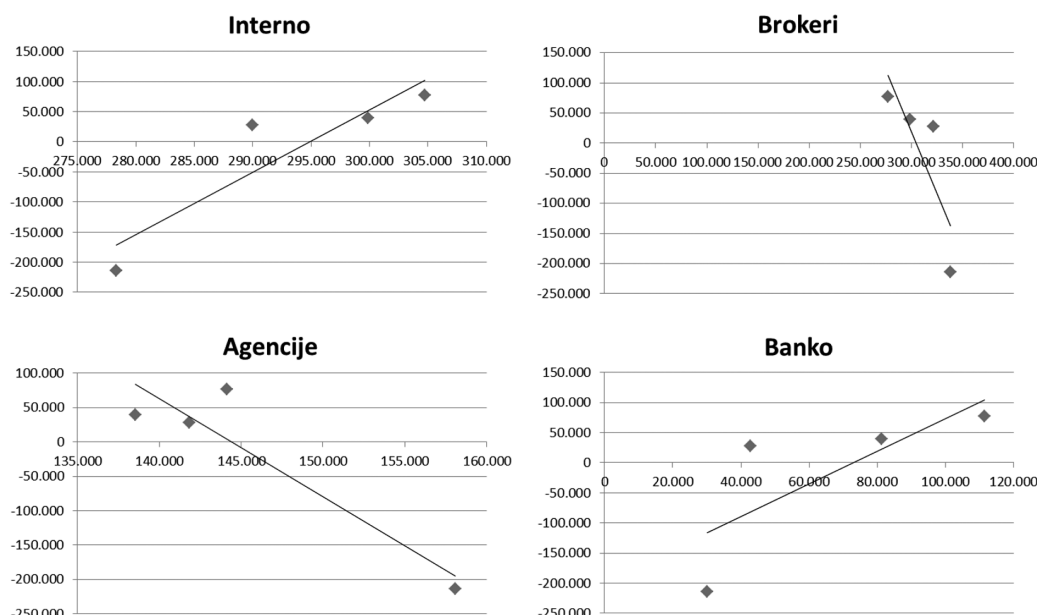
Na grafikonu 3. prikazan je skup od četiri dijagrama sa četiri najvažnija kanala distribucije za životna osiguranja kao zavisne varijable te sa bruto dobiti kao nezavisnom varijablom. Prikazani dijagrami te navedene jednadžbe s pripadajućim koeficijentima determinacije pokazuju kako postoji različita povezanost između navedenih premija iz odabranih kanala prodaje te bruto dobiti kao primjera konačne stavke izvještaja o dobiti. Iako sa malim uzorkom najveću linearnu povezanost između promatranih varijabli pokazuje analiza povezanosti kanala bankoosiguranja u kontekstu zaračunate premije i bruto dobiti.

**Tablica 1.** Prikaz jednadžbe pravaca bruto premija životnih osiguranja pripadajućim koeficijentima determinacije

Bruto premija životnih osiguranja iz kanala agencije i bruto dobit	$y = -17.58x + 614376$	$R^2 = 0.8645$
Bruto premija životnih osiguranja iz kanala banko i bruto dobit	$y = 2.8369x - 266947$	$R^2 = 0.9788$
Bruto premija životnih osiguranja iz kanala brokери i bruto dobit	$y = -69.738x + 217766$	$R^2 = 0.5495$
Bruto premija životnih osiguranja iz kanala interno u odnosu na bruto dobit	$y = -19.177x + 1E+06$	$R^2 = 0.6902$

Izvor: Obrada autora

Koeficijent determinacije naveden u tablici 1. koji iznosi 0.9788 je najveći od svih promatranih parametara. U tom kontekstu navedeni koeficijent determinacije po interpretativnoj ljestvici spada gotovo u potpunu povezanost, dok ostali analizirani slučajevi pokazuju srednje jaku ili jaku povezanost. Pogotovo se to odnosi na brokere koji u promatranom razdoblju pokazuju koeficijent determinacije u razini 0.5495 što je srednje jaka povezanost.



**Grafikon 4.** Dijagrami rasipanja sa kanalima distribucije neživotnih osiguranja u razdoblju od 2014. do 2017. godine

Izvor: Obrada autora

Na grafikonu 4. prikazan je skup od četiri dijagrama sa četiri najvažnija kanala distribucije za neživotna osiguranja kao zavisne varijable te sa bruto dobiti kao nezavisnom varijablom te kao u prethodnom slučaju pokazuju srednje jaku ili jaku povezanost. Za razliku od banko osiguranja u kontekstu životnih osiguranja, ovdje ne postoji određeni kanal distribucije koji prikazuje skoro potpunu povezanost. Jaku povezanost pokazuju interni kanal distribucije te agencijski kanal distribucije koji zauzimaju i najveći dio vezan uz neživotna osiguranja i donosa bruto premije poduzećima.

Tablica 2 potvrđuje koeficijentom determinacije  $R^2 = 0.8327$  najveću ostvarenu bruto premiju u kanalu prodaje interno za neživotno osiguranje. S druge strane, banko kanal prodaje ostvaruje najmanju bruto dobit.



**Tablica 2.** Prikaz jednadžbe pravaca bruto premija neživotnih osiguranja pripadajućim koeficijentima determinacije

Bruto premija neživotnih osiguranja iz kanala interno u odnosu na bruto dobit	$y = 10.364x - 3E+06$	$R^2 = 0.8327$
Bruto premija neživotnih osiguranja iz kanala brokeri i bruto dobit	$y = -4.1085x + 1E+06$	$R^2 = 0.6797$
Bruto premija neživotnih osiguranja iz kanala agencije i bruto dobit	$y = -14.235x + 2E+06$	$R^2 = 0.8537$
Bruto premija neživotnih osiguranja iz kanala banko i bruto dobit	$y = 2.7057x - 197340$	$R^2 = 0.5723$

Izvor: Obrada autora

Nadalje, napravljena je analiza linearne povezanosti između životnih i neživotnih osiguranja s kanalima prodaje koristeći Pearsonov koeficijenti korelacije. U tablici 3. prikazani su Pearsonovi koeficijenti korelacije za sve analizirane slučajeve kako bi se dobio dodatan uvid u povezanost odnosno nepovezanost određenih varijabli u analiziranim slučajevima.

**Tablica 3.** Pearsonov koeficijent korelacije životnog i neživotnog osiguranja u ovisnosti kanala prodaje

Vrsta osiguranja		Bruto dobit
Životno osiguranje	Agencije	-0.93
	Banko	0.99
	Brokeri	-0.74
	Interni	-0.83
Neživotno osiguranje	Interni	0.91
	Brokeri	-0.82
	Agencije	-0.92
	Banko	0.76

Izvor: Obrada autora

Tablica 3. prikazuje ono što je ranije potvrđeno sa koeficijentima determinacije s tim da je sa Pearsonovim koeficijentom korelacije vidljivi i smjer. Tako su najveća negativna veza prikazana između agencija kao kanala distribucije i bruto dobiti te u tim slučajevima Pearsonov koeficijent korelacije iznosi -0.93 i -0.92. Najveća pozitivna veza je između banko osiguranja u slučaju životnih osiguranja te bruto dobiti i u tom slučaju Pearsonov koeficijent korelacije iznosi 0.99. To predstavlja gotovo savršenu pozitivnu korelaciju. Blizu savršenoj pozitivnoj korelaciji je i interni kanal prodaje neživotnih osiguranja u odnosu na bruto dobit društva. Pearsonov koeficijent korelacije u tom slučaju iznosi 0.92. Uz pomoć izračuna Pearsonovog koeficijenta korelacije dobili smo dodatan uvid u povezanost odnosno nepovezanost kanala prodaje u odnosu na životno i neživotno osiguranje.

## 5. ZAKLJUČAK

U radu su analizirani kanali prodaje odabranog poduzeća u industriji osiguranja te je poseban naglasak stavljen na prikaz utjecaja pojedinih distribucijskih kanala na profitabilnost poduzeća. Prema udjelima pojedinih distribucijskih kanala društava za osiguranje vodeće mjesto zauzimaju interni prodajni alati, a drugo i treće mjesto zauzimaju agencije i banko kanal distribucije koji predstavlja veliki udio za životna osiguranja. Vodeći kanal prodaje u domeni životnih osiguranja je kanal prodaje „banko“, dok je u kontekstu neživotnih osiguranja na predzadnjem

mjestu u razdoblju od 2007. do 2017. godine. Provedena je regresijska analiza kanala prodaje i profitabilnosti na temelju odabranog osiguratelja uz pomoć modela linearne regresije i Pearsonovog koeficijenta korelacije kako bi se izrazila jačina međuovisnosti između analiziranih varijabli. Rezultati regresijske analize pokazuju bruto premiju životnih i neživotnih osiguranja. Kod životnih osiguranja je izražena jača povezanost banko kanala prodaje, dok kod neživotnih osiguranja jaku vezu pokazuju interni kanal distribucije te agencijski kanal distribucije koji zauzimaju i najveći dio i time utječu na donos bruto premije poduzeća. Uz pomoć Pearsonovog koeficijenta korelacije za sve slučajeve potvrdili su se rezultati i dobili smo uvid u povezanost odnosno nepovezanost određenih varijabli u analiziranim slučajevima. Pearsonov koeficijent korelacije -0.93 i -0.92 prikazuje najveću negativnu vezu prikazanu između agencija kao kanala distribucije i bruto dobiti. Gotovo savršenu pozitivnu korelaciju i najveću pozitivnu vezu predstavlja veza banko osiguranja u slučaju životnih osiguranja te bruto dobiti s iznosom 0.99. Na kraju, može se utvrditi da na odluku osiguratelja najviše utječu skupine osiguranika, jer svaka od njih preferira različite kanale, zatim specifičnost određenog tržišta, nacionalno zakonodavstvo, vrsta usluge, njena kompleksnost, sklonost osiguranika prema određenom kanalu i slično. Svi ovi elementi predstavljaju pravce razvoja prodajnih kanala u Republici Hrvatskoj.

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**ZLOUPOTREBA POLOŽAJA ILI OVLAŠĆENJA  
IZ ČLANA 383 KRIVIČNOG ZAKONA  
FEDERACIJE BOSNE I HERCEGOVINE**

**ABUSE OF OFFICE OR AUTHORITY  
UNDER ARTICLE 383 OF THE CRIMINAL CODE  
OF THE FEDERATION OF BOSNIA AND HERZEGOVINA**

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DOI:

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**Sažetak:** *Pojava nezakonitog rada lica kojima su povjerene određene službene dužnosti nije pojava prošlosti. Ona se javlja i u savremenim uslovima, u svim državama bez obzira na njihovo društveno-ekonomsko uređenje i politički sistem. Borba protiv ove pojave je i danas aktuelna. Zbog toga, danas sve države, saglasno svojim potrebama, izgrađuju sistem mjera za suzbijanje povreda u službenoj dužnosti i u okviru tih mjera određuju za koje povrede ove dužnosti dolazi do primjene krivične sankcije.*

*Krivična djela protiv službene dužnosti su krivična djela korupcije koja su usmjerena protiv pravilnog funkcionisanja javnih službi i ona su kao posebna glava određena u krivičnom zakonu na osnovu svog zaštitnog objekta. Zloupotreba položaja ili ovlaštenja je jedno od krivičnih djela protiv službene dužnosti. Ono je osnovno krivično djelo iz kojeg proizilaze sva ostala djela protiv službene dužnosti. Zajedno s krivičnim djelom primanja mita, zloupotreba položaja ili ovlaštenja predstavlja osnovno koruptivno krivično djelo.*

**Ključne riječi:** *Zloupotreba položaja ili ovlaštenja, Službena dužnost, Federacija BiH, Krivični zakon.*

**Abstract:** *The appearance of unlawful work of persons entrusted with certain official duties is not the appearance of the past. It also appears in contemporary conditions, in all countries, regardless of their socio-economic establishment and political system. The fight against this phenomenon is still relevant today. Therefore, today, all the states, in accordance with their needs, are building a system of measures to combat offenses in their official capacity and, within those measures, they determine for which violations of this duty criminal sanctions shall be applied.*

*Criminal offenses against official duty are criminal offenses of corruption directed against proper functioning of public services and are regulated in a separate chapter in the criminal law on the basis of their protective object. The abuse of office or authority is one of criminal offenses against official duty. It is the basic criminal offense from which all other offenses against official duty arise. Together with criminal offense of bribery, abuse of office or authority is a basic corruption criminal offense.*

**Keywords:** *Abuse of office or authority, Official duty, Federation of BiH, Criminal Code.*

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## 1. UVOD

Krivično djelo zloupotrebe položaja ili ovlaštenja iz člana 383 Krivičnog zakona Federacije BiH (KZFBiH<sup>4</sup>) je opšte djelo usmjereno protiv službene dužnosti ili javne funkcije i kao takvog poznaju ga gotova sva kontinentalna evropska zakonodavstva, ali, isto tako, ono je poznato i u anglosaksonskom sistemu. Suština je ista. Zloupotrebljava se dato javno ovlaštenje s ciljem zadovoljavanja nekih drugih interesa - samo ne interesa službe.

Korupcijska krivična djela i krivična djela protiv službene dužnosti predstavljaju protivpravna ponašanja upravljena protiv pravilnog funkcionisanja javnih službi koja vrše službena ili ovlaštena lica u vršenju svoje službene dužnosti ili u vezi sa njenim vršenjem. Ovaj vid krivičnih djela u današnje vrijeme spada u kategoriju kriminaliteta sa izrazito visokim stepenom opasnosti za društvo. To se ogleda ne samo u materijalnim posljedicama koje vršenjem ovih djela nastaju, već posebno u razaranju i remećenju osnovnih tokova društvenog života kroz napad na moralne vrijednosti društva.<sup>5</sup> Ova pojava ili djelo ima dosta dugu istoriju ili tradiciju po ugledu na delikte protiv imovine ili tijela, pa se slobodno može reći da spada u red već klasičnih krivičnih djela<sup>6</sup>.

Sistematizacija krivičnih djela protiv službene dužnosti u BiH predstavlja reperkusiju složene ustavne strukture BiH i postojanja četiri zasebna krivična zakonodavstva koja su po svojoj sadržini u cijelosti autonomna. U pogledu krivičnih djela protiv službene dužnosti, usvojena je koncepcija podijeljene zakonodavne nadležnosti između BiH, s jedne, i entiteta i distrikta Brčko, s druge strane. Kriterij razgraničenja jeste pozicija službenih ili odgovornih lica, odnosno da li se ta pozicija koju lice obavlja nalazi u organima, institucijama ili pravnom licu države, entiteta ili distrikta, pa se, osnovom toga, određuje i krivični zakon koji se ima primijeniti. Određene razlike između krivičnih zakona u BiH, kada je u pitanju sistematizacija i definiranje krivičnih djela protiv službene dužnosti, pored naziva samih glava, postoji i u nazivu i opisu pojedinih krivičnih djela. Međutim, može se reći da su oni u bitnom dijelu istovjetni.

Krivični zakon BiH (KZBiH)<sup>7</sup>, za razliku od ostalih zakona, u samom nazivu glave dodaje i pojam korupcije, čime na prvo mjesto stavlja djela korupcije (tj. primanje i davanje mita), dok drugi krivični zakoni (KZFBiH, Republike Srpske<sup>8</sup> i Brčko distrikta<sup>9</sup>), kao osnovno djelo označavaju djelo zloupotrebe službenog položaja ili ovlaštenja. Iako za razliku od KZBiH, ovi drugi krivični zakoni ne ističu *expressis verbis* pojam korupcije u sam naziv glave, analizom zakonskog bića svakog od tih djela pojedinačno, jasno se vidi da je koruptivna radnja u osnovi gotovo svih tih krivičnih djela, uprkos tome što u nazivu ne stoji pojam korupcija *per se*.

<sup>4</sup> „Službene novine Federacije BiH“, br. 36/03, 21/04, 69/04, 18/05, 42/10, 42/11, 59/14, 76/14, 46/16 i 75/17.

<sup>5</sup> Babić et al. (2005). *Komentari krivičnih/kaznenih zakona u Bosni i Hercegovini*, Knjiga I, Vijeće Evrope i Evropska komisija, Sarajevo, 706.

<sup>6</sup> Krivično djelo zloupotrebe položaja je krivično djelo poznato i u *Common Law* sistemu. Smatra se da ovo djelo datira iz predmeta *Rex v Bembridge* iz 1783. godine [3 Doug K B 32, [1783] EngR 170, (1783) 3 Doug 327, (1783) 99 ER 679 (B)]. <https://swarb.co.uk/rex-v-bembridge-1783/>, 9.3.2020.

<sup>7</sup> „Službeni glasnik Bosne i Hercegovine“, br. 3/03, 32/03, 37/03, 54/04, 61/04, 30/05, 53/06, 55/06, 32/07, 8/10, 47/14, 22/15, 40/15 i 35/18.

<sup>8</sup> „Službeni glasnik Republike Srpske“, broj 64/17.

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## 2. TEORIJSKO ODREĐENJE

Krivično djelo zloupotrebe položaja ili ovlaštenja ima karakter opšteg krivičnog djela protiv službene dužnosti, iz razloga što većina drugih djela protiv istog objekta predstavljaju u stvari poseban oblik tog djela. Ono obuhvata ona nezakonita postupanja službenih lica u vršenju službe koja se preduzimaju u namjeri pribavljanja za sebe ili drugog neke koristi, odnosno nanošenje štete drugom. Po tome se ovo krivično djelo i razlikuje od drugih oblika zloupotrebe službenih ovlaštenja kao što su disciplinski ili neki drugi prestupi koji takođe predstavljaju nepropisno vršenje službe<sup>10</sup>.

Krivično djelo zloupotrebe položaja ili ovlaštenja je pravo službeno krivično djelo, jer učinilac može biti isključivo službena ili odgovorna osoba, što je posebno konstitutivno obilježje zakonskog bića ovog krivičnog djela. Iz navedenog proizlazi da se ovo djelo može ostvariti jedino u vršenju službene dužnosti, a izvan toga ovo djelo ne postoji<sup>11</sup>. Izvršilac postupa suprotno interesima službe, koristeći protivpravno mogućnosti koje su mu date u službi ne radi interesa ili ciljeva službe, već radi ostvarenja vlastite koristi ili koristi za drugog. Dakle, odgovornost javne funkcije ili službe se stavlja u drugi plan u odnosu na egoističke i nezakonite interesa individue kojoj je ta odgovornost data.

U teoriji krivičnog prava poznata je dioba zloupotrebe službene dužnosti na zloupotrebu u objektivnom i subjektivnom smislu. U objektivnom smislu postoji zloupotreba kad službeno lice prekorači granice svojih ovlaštenja ili ne vrši dužnost koju bi moralo da vrši. Zloupotreba u subjektivnom smislu postoji kad učinilac preduzima službenu radnju u granicama svog ovlaštenja, ali pri tome nije motivisan interesima službe, već nekim drugim ciljevima vezanim za svoj interes ili interes drugog lica. Ova podjela, međutim, u našem pravu nema značaja, jer je za postojanje svake zloupotrebe kao krivičnog djela potreban subjektivni element - namjera pribavljanja imovinske ili druge koristi, odnosno nanošenja štete.

## 3. ZAKONSKO BIĆE KRIVIČNOG DJELA ZLOUPOTREBE POLOŽAJA

Stavom 1 člana 383 KZFBiH propisan je osnovni oblik ovog krivičnog djela koje čini službena ili odgovorna osoba u Federaciji koja iskorišćavanjem svog službenog položaja ili ovlaštenja, prekoračivši granice svoga službenog ovlaštenja ili ne obavivši svoje službene dužnosti, pribavi sebi ili drugom kakvu korist, drugom nanese kakvu štetu ili teže povrijedi prava drugog. Široka formulacija je odlika ovog djela i upravo ta osobina ga čini čestom kvalifikacijom u praksi.

Stavovima 2 i 3 ovog člana određeni su objektivni uslovi inkriminacije u vidu označenih visina pribavljene imovinske koristi ili štete (10.000 i 50.000) što pored određene krivične sankcije (kazne zatvora) ima i druge krivičnopravne konsekvence.

Izmjenama i dopunama KZFBiH iz 2010. godini<sup>12</sup> uveden je novi stav 4 ovog člana koji predstavlja realizaciju temeljnog pravnog principa da niko ne može zadržati korist pribavljenu izvršenjem krivičnog djela.

<sup>10</sup> Babić, M. & Marković, I. (2007). *Krivično pravo, Posebni dio*, Banja Luka: Pravni fakultet, 248.

<sup>11</sup> Ferhatović, A. (2012). *Zloupotreba položaja ili ovlaštenja*, Sarajevo: Godišnjak Pravnog fakulteta u Sarajevu, 148.

<sup>12</sup> „Službene novine Federacije BiH“, broj 42/10.

#### 4. SVOJSTVO SUBJEKTA DJELA (UČINIOCA)

Kod ovog krivičnog djela svojstvo službene ili odgovorne osobe<sup>13</sup> je konstitutivno obilježje ovog djela, što znači da ovog djela nema bez tog svojstva učinioca. Iz člana 2 stav 3 KZFBiH se jasno vidi namjera zakonodavca da pojmom službena osoba ne obuhvati samo državne službenike ili činovnike, tj. samo lica zaposlena u administrativnom aparatu, već i lica koja obavljaju službena ili javna ovlaštenja i u drugim, može se reći vandržavnim ili vanupravnim tijelima (pravnim licima) kojima su povjereni poslovi od javnog značaja. Naročito su česti učinioci krivičnih djela službenih osoba koje rješavaju o pravima i obavezama građana i pravnih osoba kao što je izdavanje određenih dozvola ili saglasnosti, izdavanje uvjerenja, rješenja, diploma, raznih poreskih, carinskih i drugih finansijskih obaveza prema državi<sup>14</sup>.

Polazeći od člana 2 stav 6 KZFBiH, odgovorna osoba je osoba u privrednom društvu ili u drugoj pravnoj osobi kojoj je s obzirom na njenu dužnost ili na osnovu posebnog ovlaštenja povjeren određeni krug poslova koji se odnose na primjenu zakona ili propisa donesenih na osnovu zakona ili opšteg akta privrednog društva ili druge pravne osobe u upravljanju i rukovanju imovinom ili se odnose na rukovođenje proizvodnjom ili nekom drugom privrednom djelatnošću ili na nadzor nad njima.

#### 5. RADNJA KRIVIČNOG DJELA

Iz stava 1 člana 383 KZFBiH proizilazi da se radnja ovog krivičnog djela manifestuje u tri modaliteta: iskorištavanje službenog položaja ili ovlaštenja, prekoračenje granica službenog ovlaštenja i nevršenje službene dužnosti.

Iskorištavanje službenog položaja ili ovlaštenja postoji kada službeno lice preduzima radnje koje su formalno u granicama njegovog ovlaštenja, ali su one protivpravne u materijalnom smislu, jer su suprotne interesima i zadacima službe. Čest primjer za ovaj modus radnje jesu razne zloupotrebe diskrecionih ovlaštenja. U ovakvoj situaciji, iako lice djeluje u okviru svoje službene dužnosti, ono je zloupotrebljava.

Prekoračenje granica službenog položaja ili ovlaštenja postoji kada službena ili odgovorna osoba prekorači granice svog stvarnog ovlaštenja, odnosno svoje stvarne nadležnosti. Djelo će postojati i kada službeno lice postupa bez prethodnog odobrenja ili saglasnosti drugog službenog lica, a koja je u datom slučaju bila neophodna. Za postojanje ovog vida zloupotrebe potrebno je utvrditi granice ovlaštenja službenog lica.

Nevršenje službene dužnosti postoji onda kada službeno lice propusti da vrši svoju službenu dužnost, odnosno kada propušta ono činjenje na koje je obavezano svojim službenim položajem ili ovlaštenjem. Radi se o manjkavom izvršenju svojih obaveza, propuštanju preduzimanja onih radnji koji su u interesu same službe i na čije izvršavanje je službeno lice obavezano zakonom, podzakonskim aktima, datim ovlaštenjem, pa i samim interesom službe, što znači da u odre-

<sup>13</sup> Izuzetak postoji kod krivičnih djela Davanje dara i drugih oblika koristi (član 381 KZFBiH i član 218 KZBiH), Protivzakonito posredovanje (član 382 KZFBiH i član 219 KZBiH), Pronevjera u službi (član 384 KZFBiH i član 221 KZBiH) i Posluga u službi (član 386 KZFBiH i član 223 KZBiH). Naime, pored službenog ili odgovornog lica, učinilac ovdje može biti i svako drugo lice (*delicta communia*). Radi se o određenom obliku eksternog napada na pravilno i zakonito vršenje službene dužnosti od strane trećih lica koja nisu nosioci datih ovlaštenja ali ipak svojim radnjama (poput davanja mita ili protivzakonitog posredovanja) narušavaju rad službene dužnosti.

<sup>14</sup> Babić, M. & Marković, I. (2005). *Krivično pravo, posebni dio*, Banja Luka: Pravni fakultet, 323.

đenim situacijama ne mora postojati formalna obaveza na činjenje da bi se radilo o propuštanje određene obaveze. Međutim, ovaj modus radnje krivičnog djela može se izvršiti i formalnim činjenjem.

#### 4. POSLJEDICA

Posljedica ovog krivičnog djela u suštinskom smislu, iako to nije eksplicitno navedeno u členu 383 KZFBiH - jeste ugrožavanje službene dužnosti. Posljedica se pojavljuje u slijedećim alternativno postavljenim oblicima: a) pribavljanje sebi ili drugom kakve koristi, b) nanošenje drugom kakve štete i c) teža povreda prava drugog. Posljedica u navedenim oblicima predstavlja bitan element ovog krivičnog djela, što znači da je zloupotreba položaja ili ovlaštenja iz člana 383 KZFBiH materijalno krivično djelo koje je dovršeno ostvarenjem jednog od navedenih oblika posljedice. Teža povreda prava drugog se mora posmatrati šire kao element štete, shodno pravilima i načinu definisanja u drugim oblastima prava.

#### 5. KRIVICA

Tumačeći odredbe člana 383 KZFBiH, jasno je da se ovo krivično djelo može počiniti samo umišljajem kao oblikom krivice. Svijest učinioaca mora obuhvatiti sve elemente djela iz ovog člana. Međutim, pored umišljaja (direktnog ili eventualnog), potrebna je i namjera. Namjera mora obuhvatiti kako svijest o tome da se iskorištava položaj ili ovlaštenje, prekoračuju granice ovlaštenja ili ne obavlja dužnost, tako i svijest da se prouzrokuje šteta.

#### 6. KVALIFIKOVANI OBLICI DJELA

Kvalifikovani oblik krivičnog djela postoji kada se osnovnom obliku djela dodaju određene okolnosti koje ostvarenjem čine teže oblike tog djela, ali ne i sasvim novo krivično djelo. U konkretnom slučaju, kod djela iz člana 383 KZFBiH, ta okolnost je posljedica djela<sup>15</sup>.

Krivično djelo zloupotrebe položaja ili ovlaštenja, onako kako je to određeno st. 2 i 3 člana 383 KZFBiH, ima dva kvalifikovana oblika. Stavom 2 ovog člana je propisan prvi kvalifikovani oblik koji se ostvaruje ukoliko visina pribavljene imovinske koristi prelazi iznos od 10.000 KM. Propisana kazna za ovaj oblik jeste kazna zatvora od jedne do deset godina, što slijedom člana 27 stav 1 tačka a) Zakona o sudovima u Federaciji BiH znači da su za ovaj oblik djela stvarno nadležni opštinski sudovi u Federaciji BiH<sup>16</sup>.

Najteži oblik ovog krivičnog djela iz stava 3 koji postoji ukoliko iznos pribavljene imovinske koristi prelazi iznos od 50.000 KM. Propisana je kazna zatvora od najmanje tri godine, što znači da se na gornju granicu kazne odnosi opšti maksimum od 20 godina zatvora. Zakonom o sudovima u Federaciji BiH je, zbog visine zapriječene kazne, za ovaj oblik određena stvarna nadležnost kantonalnih sudova u Federaciji<sup>17</sup>.

<sup>15</sup> Bačić, F. (1980). *Krivično pravo*, Zagreb: Informator, Zagreb, 286.

<sup>16</sup> Član 27 stav 1 tačka a) Zakona o sudovima u Federaciji BiH („Službene novine Federacije BiH“, br. 38/05, 22/06, 63/10, 72/10 i 7/13).

<sup>17</sup> Član 28 stav 1 tačka a).

## 7. ODUZIMANJE KORISTI

Oduzimanje imovinske koristi je krivičnopravna mjera *sui generis*, ali ima nemjerljiv značaj u krivičnom pravu. Ona predstavlja realizaciju opšteg pravnog principa prema kojem niko ne može zadržati protivpravnu imovinsku korist pribavljenu izvršenjem krivičnog djela. U stavu 4 člana 383 KZFBiH kratko i jasno stoji da će se pribavljena korist oduzeti. S obzirom na to da stav 4 govori o „oduzimanju koristi“, a ne o „oduzimanju imovinske koristi“, treba tumačiti ovu odredbu na način da će se svaki oblik koristi pribavljen izvršenjem zloupotrebe položaja ili ovlaštenja oduzeti, tj. da će se izvršiti povrat u stanje prije izvršenja djela (*restitutio in integrum* u krivičnopravnom smislu).

## 8. ZAKLJUČAK

Krivično djelo zloupotrebe položaja ili ovlaštenja čini službeno ili odgovorno lice koje iskorištavanjem svog položaja ili ovlaštenja, prekoračenjem granica svog ovlaštenja ili nevršenjem svoje službene dužnosti pribavi sebi ili drugom korist, drugome nanese štetu ili teže povrijedi pravo drugog. Ovakva definicija ili skup objektivno-subjektivnih elemenata, manje više, karakterišu ovo krivično djelo, ne samo u krivičnom zakonodavstvu BiH. Ono predstavlja osnovno ili opšte krivično djelo usmjereno protiv službene dužnosti čija zloupotreba kao zaštitnog objekta predstavlja manifestaciju fenomena korupcije, pa je je otkrivanje i dokazivanje ovog krivičnog djela, u stvari, otkrivanje i dokazivanje korupcije. Stoga su potrebni modusi krivičnog procesnog i kriminalističkog rada u segmentnima otkrivanja i dokazivanja ovog krivičnog djela.

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# UTJECAJ REFORMI POSLOVNOG OKRUŽENJA NA KONKURENTNOST U ZEMLJAMA BIVŠE JUGOSLAVIJE (PLUS ALBANIJA)

## THE IMPACT OF THE BUSINESS ENVIRONMENT REFORM ON COMPETITIVENESS IN THE COUNTRIES OF THE FORMER YUGOSLAVIA (PLUS ALBANIA)

Valentina Vučković<sup>1</sup> 

DOI:

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**Sažetak:** Značaj konkurentnosti za povećanje razvoja zemalja, industrija i poduzeća u literaturi je gotovo općeprihvaćeno stajalište. Pritom, jedan od faktora koji se smatra ključnim za ostvarenje napretka na ljestvicama konkurentnosti zemalja odnosi se na reforme poslovnog okruženja. Iako je veliki broj zemalja postigao značajan gospodarski napredak kroz reforme prve generacije (liberalizaciju, makroekonomsku stabilizaciju, privatizaciju), pravi izazov predstavlja učiniti koristi ovih reformi održivima u dugom roku. Stoga su se reforme u većini zemalja počele usmjeravati na poboljšanje poslovnog okruženja čime se prvenstveno nastoji uspostaviti „kooperativni“ odnos između države, tržišta i civilnog društva. Glavni cilj ovog rada je stoga istražiti utjecaj reformi poslovnog okruženja na nacionalnu konkurentnost, na uzorku zemalja bivše Jugoslavije, plus Albanija. Za potrebe analize, osim makroekonomskih pokazatelja, usporedno se koriste baze podataka Svjetskog gospodarskog foruma (Izješća o globalnoj konkurentnosti), Svjetske banke (Doing Business serija izvještaja, World Development Indicators, i Worldwide Governance Indicators), te EBRD-a (Transition Report). Empirijska analiza utjecaja reformi poslovnog okruženja na dinamiku konkurentnosti provesti će se kroz ekonometrijsku procjenu na panel podacima za odabrane zemlje.

**Ključne riječi:** Konkurentnost, Poslovno Okruženje, Reforme, Zemlje Bivše Jugoslavije.

**Abstract:** The importance of competitiveness for increasing the development of countries, industries and enterprises in the literature is an almost generally accepted view. At the same time, one of the factors that is considered key to achieving progress on the country's competitiveness scales is the reform of the business environment. Although a large number of countries have made significant economic progress through first-generation reforms (liberalization, macroeconomic stabilization, privatization), the real challenge is to make the benefits of these reforms sustainable in the long run. Therefore, reforms in most countries have begun to focus on improving the business environment, which primarily seeks to establish a „cooperative“ relationship between the state, the market and civil society. The main objective of this paper is therefore to investigate the impact of business environment reforms on national competitiveness, on a sample of the countries of the former Yugoslavia, plus Albania. For the purposes of analysis, in addition to macroeconomic indicators, the databases of the World Economic Forum (Global Competitiveness Report), the World Bank (Doing Business series of reports, World Development Indicators, and Worldwide Governance Indicators), and the EBRD (Transition Report) are used in parallel. Empirical analysis of the impact of business environment reforms on competitiveness dynamics will be conducted through econometric assessment on panel data for selected countries.

**Keywords:** Competitiveness, Business Environment, Reforms, Former Yugoslav Countries.

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## 1. UVOD

Značaj konkurentnosti za povećanje razvoja zemalja, industrija i poduzeća u literaturi je gotovo Zopćeprihvaćeno stajalište. Pritom, jedan od faktora koji se smatraju ključnima za ostvarenje napretka na ljestvicama konkurentnosti zemalja odnosi se na reforme poslovnog okruženja. Sam koncept poslovnog okruženja povezan je s razvojem privatnog sektora, a odnosi se na kreiranje uvjeta poslovanja koji potiču dinamiku privatnog sektora (Konig, da Silva i Mhlanga, 2013: 3). UNIDO (2008: 5-6) razlikuje neoklasični i neostrukturalistički pristup objašnjavanju poslovnog okruženja sa stajališta različitih pretpostavki o njegovim ključnim elementima, uloge države te kreiranja odgovarajućih politika. Unutar neoklasičnog pristupa koji se primjenjuje i u ovom radu razlikuju se još uži koncept regulatornog poslovnog okruženja te širi koncept investicijske klime. Pritom, regulatorno poslovno okruženje obuhvaća regulacije koje trenutno utječu na poslovanje kroz troškove poštivanja njihovih odredbi. Navedeni troškovi uključuju direktne troškove poput troškova dobivanja dozvola te indirektno troškove koji su posljedica često nepotrebnih transakcija (npr. vremena potrošenog na dobivanje dozvola te troškovi koji proizlaze iz regulacija koje kompliciraju provođenje ugovora te zapošljavanje ili otpuštanje radnika), a analizirani su u okviru *Doing Business* publikacija Svjetske banke. Nadalje, koncept investicijske klime, uz sve elemente regulatornog poslovnog okruženja uključuje i čimbenike specifične za pojedine lokacije koji oblikuju mogućnosti i poticaje poduzeća da produktivno investiraju, povećavaju zaposlenost i šire svoje poslovanje (npr. kvalitetu infrastrukture, zdravstveni sustav, politike obrazovanja, vladavinu prava, političku stabilnost i sigurnost) (Svjetska banka, 2004). Nadalje, Sinha i suradnici (2001: 22-25) grupiraju elemente poslovnog okruženja s aspekta tri razine ekonomske aktivnosti (makro, mezo i mikro), pri čemu kombinacija čimbenika na makro razini - ekonomski sustavi i politike, politički sustav i upravljanje te društveni i kulturološki kontekst - oblikuje formalna i neformalna „pravila igre“. Ovaj pristup temelji se na postavkama nove institucionalne ekonomije koja se može podijeliti na dva segmenta: prvi se odnosi na formalna i neformalna „pravila igre“ (*engl. rules of the game*) koja se u većini slučajeva fokusiraju na javni sektor i institucionalno okruženje, a drugi na način „igranja igre“ (*engl. play of the game*) koji se bavi upravljanjem ugovornim odnosima i ekonomikom organizacija (Williamson, 2012). Dakle, za očekivati je da će reforme kojima se poboljšava kvaliteta poslovnog okruženja kao jednog od čimbenika konkurentnosti, doprinijeti i poboljšanju ekonomskih rezultata zemalja.

Glavni cilj rada je istražiti utjecaj reformi poslovnog okruženja na nacionalnu konkurentnost, na uzorku zemalja bivše Jugoslavije, plus Albanija. Rad je strukturiran na sljedeći način. Nakon uvoda, daje se pregled literature po pitanju utjecaja reformi poslovnog okruženja na različite aspekte ekonomskog razvoja zemalja. U trećem se dijelu rada procjenom fiksnog panel modela ispituje utjecaj reformi poslovnog okruženja na konkurentnost, dok se u posljednjem dijelu donose zaključci s preporukama za buduće istraživanje.

## 2. UČINAK REFORMI POSLOVNOG OKRUŽENJA NA EKONOMSKE PERFORMANSE ZEMALJA: PREGLED DOSADAŠNJIH EMPIRIJSKIH ISTRAŽIVANJA

Unatoč velikom broju koristi reformi na ekonomske rezultate koje im se pripisuju, empirijska literatura nije rezultirala konsenzusom o njihovom pozitivnom ili negativnom utjecaju (Babetskii i Campos, 2007)<sup>2</sup>. Naime, dok empirijske analize ukazuju na to da su reforme doprinijele boljim performansama zemalja s aspekta ekonomskog rasta u srednjem i dugom roku, određeni reformski programi podbacili su s aspekta realiziranja očekivanih ekonomskih koristi u kratkom roku.

<sup>2</sup> Za detaljniji pregled postojećih teorijskih i empirijskih istraživanja vidjeti Vučković (2014).

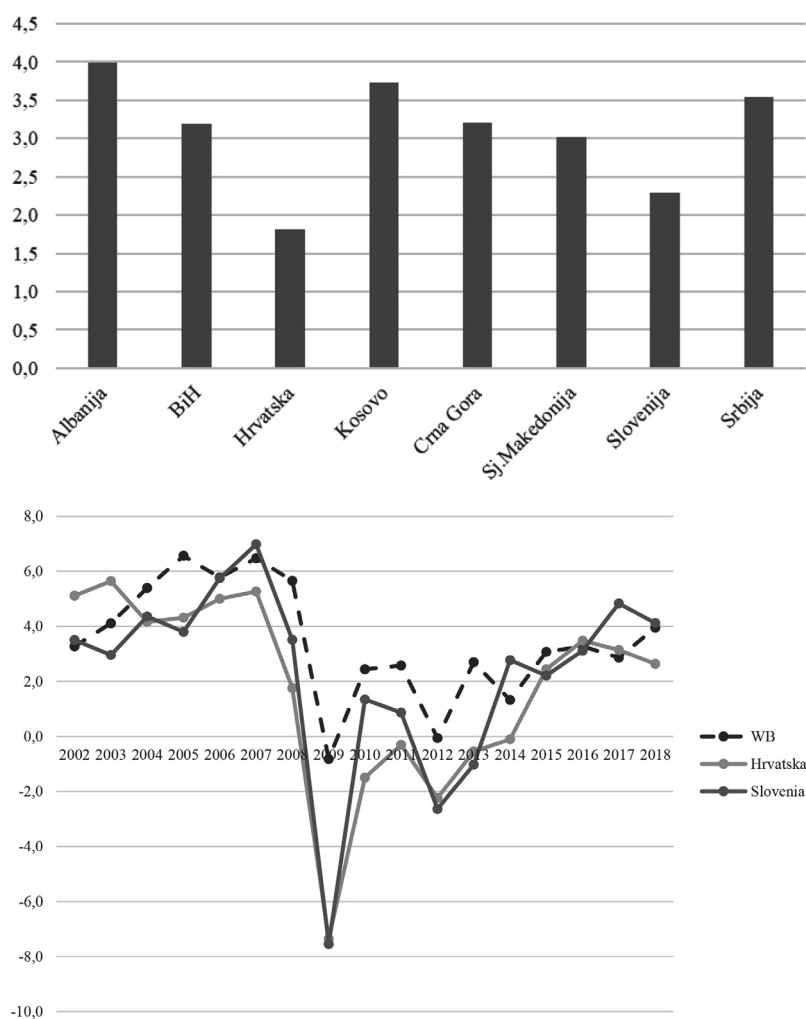
Primjer za to je financijska liberalizacija koja je u mnogim zemljama zapravo dovela do financijskih kriza (Kirkpatrick i Piese, 2001). Međutim, važno je naglasiti da, iako postoji veliki broj istraživanja o utjecaju reformi na makroekonomske pokazatelje, ona su se većinom fokusirala na analizu učinka pojedinačnih reformi, a obuhvaćala su i heterogeni uzorak zemalja, što znatno otežava usporedbu dobivenih rezultata. Osim toga, problem predstavlja i nedostatak općeprihvaćenih teorijskih modela s aspekta varijabli koje su često uključene kao nezavisne varijable u modelu, pri čemu se posebno misli na problem endogenosti varijabli. Tako primjerice Cuervo-Cazurra i Dau (2008) analiziraju utjecaj strukturnih reformi na cjenovnu konkurentnost, odnosno izvoz poduzeća u zemljama Latinske Amerike u periodu od 1990. do 2005. godine, pri čemu dobiveni rezultati ukazuju na pozitivan učinak strukturnih reformi na izvoz. Međutim, autori ističu da strukturne reforme, smanjujući transakcijske troškove, omogućuju poduzećima da poboljšaju svoju efikasnost i konkurentnost na međunarodnoj razini. Također, autori pokazuju da su podružnice stranih kompanija najveći dobitnici reformi, a slijede ih domaća privatna dok je učinak strukturnih reformi na državna poduzeća negativan. Nadalje, Eifert (2009) analizira učinak reformi na investicije i produktivnost pri čemu procjenjuje učinak individualnih reformskih programa (iz pet specifičnih područja sadržanih u bazi *Doing Business*) s jedne, te agregatni učinak svih reformi s druge strane. Autor je proveo istraživanje za razdoblje od 2003. do 2007. godine, a rezultati ukazuju na pozitivnu vezu između reformi i investicija, te rasta BDP-a sa statistički značajnijim učinkom u zemljama s većom kvalitetom upravljanja. Međutim, rezultati procjene učinka individualnih reformi na investicije i rast nisu se pokazali statistički značajni. Djankov i suradnici (2006), također koristeći se podacima iz *Doing Business* izvještaja, analiziraju utjecaj regulatornog opterećenja na ekonomski rast pri čemu koriste agregatni indeks koji se temelji na sedam komponenti koje mjere regulatorno opterećenje, za period između 1993. i 2002. godine. Dobiveni rezultati ukazuju na statistički značajnu i negativnu vezu između regulatornog opterećenja i rasta. Specifično, pomak od najgoreg prema najboljem kvartalu regulacije dovodi do poboljšanja od 2,3 postotnih poena u ekonomskom rastu. Još se jedno istraživanje temelji na *Doing Business* podacima. Jayasuriya (2011) je, provodeći analizu na uzorku od 84 zemlje u razdoblju od 2006. – 2009. godine, pokazala da poboljšanje u rangiranju zemalja dovodi do povećanja priljeva izravnih stranih investicija za oko 300 milijuna USD. Međutim, na uzorku zemalja u razvoju, nema statistički značajne veze, te autorica upozorava da je dobivene rezultate potrebno interpretirati s dozom opreza, te po mogućnosti provesti analizu na uzorku pojedinih zemalja. Također, važan rezultat koji proizlazi iz ove analize je da nema statistički značajnog utjecaja pojedinih elemenata poslovnog okruženja sadržanih u *Doing Business* bazi čime ukazuje na zaključak da se veći učinak postiže kombinacijom nekoliko reformi, a ne fokusiranjem napora na provedbu reformi koje se odnose samo na pokretanje poslovanja. Za razliku od prethodnih autora, Haidar (2012) ističe da je rast funkcija promjene (a ne razine) opterećenja regulatornog okvira. Stoga on u svojoj analizi kao reformsku varijablu koristi ukupan broj regulatornih reformi provedenih u periodu od 2006. do 2010. godine na uzorku od 172 zemlje. Rezultati provedene analize ukazali su na pozitivnu vezu između reformi i ekonomskog rasta: u prosjeku, svaka reforma dovodi do povećanja stope rasta od 0,15 %. Nadalje, s pomakom od zemalja s najmanjim brojem reformi (0) prema zemljama s najvećim brojem reformi (23) dolazi do povećanja stope BDP-a od 3,45 postotnih poena. Rezultati su statistički značajni i nakon što se uzmu u obzir različite *proxy* varijable za institucionalne i ekonomske pokazatelje (npr. korupcija, FDI, stanovništvo, državna potrošnja, financijska sloboda, politička stabilnost, vladavina prava itd.).

Konačno, budući da se kao ključni generator dugoročnog rasta i razvoja često ističe razvoj dinamičnog privatnog sektora, u literaturi postoji i veliki broj radova koji pokazuju pozitivan utjecaj reformi na razvoj privatnog sektora i pokretanje poslovanja (primjerice Vučković i suradnici 2016; Kirkpatrick i Piese, 2001; Klapper i Love, 2011, Audretsch, Keilbach i Lehmann, 2006 itd.).

### 3. EKONOMETRIJSKA ANALIZA

U ovom se dijelu rada ispituju dosadašnji nalazi na uzorku zemalja bivše Jugoslavije, plus Albanija. Ovako odabran uzorak zemalja je zanimljiv iz nekoliko aspekata: zemlje nisu imale iste početne uvjete (uslijed ratnih i drugih zbivanja), karakterizira ih različiti tip upravljanja ekonomijama, u različitim su fazama procesa pristupanja EU, dok su i dvije zemlje već EU članice. Također, tijekom posljednjih nekoliko godina EU je uvela proces upravljanja kojim se i od zemalja Zapadnog Balkana zahtijeva izrada godišnjih programa gospodarskih reformi (*Economic Reform Programme (ERP)*). Prema ERP-u za period od 2016. do 2018. godine najveći naglasak stavljen je na niz mjera usmjerenih na fiskalnu konsolidaciju i strukturne reforme u području poslovnog okruženja (Osbuild i Bartlett, 2019), čime se veliki ponder daje kvaliteti poslovnog okruženja kao jednog od čimbenika gospodarskog rasta i rasta konkurentnosti.

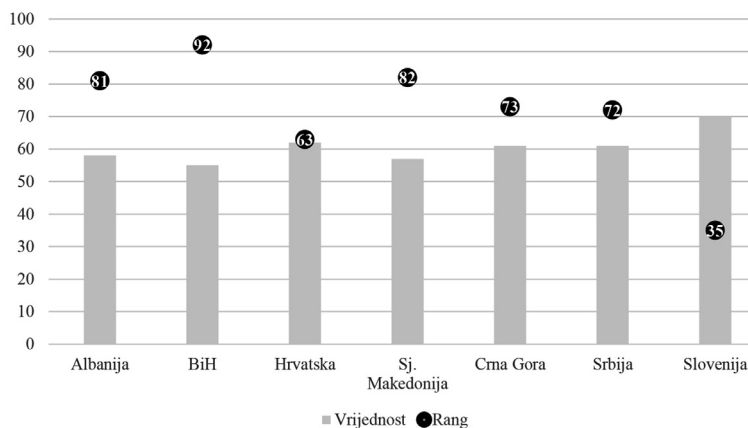
Za potrebe analize, zemlje su podijeljene u dvije skupine: 6 zemalja regije Zapadnog Balkana (WB) dok se Hrvatska i Slovenija izdvajaju kao članice EU. Prvo, fokusirajući se na tradicionalne indikatore sadržane u gotovo svim definicijama koncepta konkurentnosti kao ishoda, analizu započinjemo s najčešće korištenim pokazateljem ekonomske uspješnosti neke zemlje, odnosno stopom rasta BDP-a (Grafikon 1).



**Grafikon 1.** Stopa rasta BDP-a (prosjeak po zemljama i kroz vrijeme)

**Izvor:** Obrada autora prema World Development Indicators (WDI) (2019).

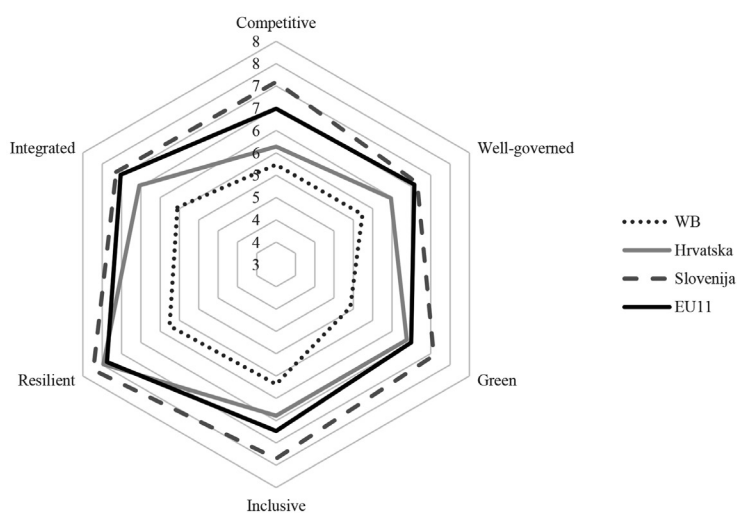
Iz grafikona je razvidno da s aspekta makroekonomskog pokazatelja koji se najčešće koristi u analizi konkurentnosti zemalja, postoje značajne razlike među zemljama. Stoga se na Grafikonu 2 prikazuje pozicija zemalja mjerena prema metodologiji *Izješća globalne konkurentnosti WEF-a* (najnoviji podaci GCI 2018-2019), koja osim BDP-a uzima u obzir i druge institucionalne, političke, ekonomske i društvene pokazatelje.



**Grafikon 2.** Međunarodna konkurentnost zemalja (GCI 2018-2019)

**Izvor:** Obrada autora prema WEF (2019).

Ovdje je također razvidno da među zemljama postoje velike razlike, tako da se u nastavku analizira poslovno okruženje kao jedan od čimbenika nacionalne konkurentnosti. Naime, smatra se da jedan od ključnih izvora gospodarskih problema u regiji Zapadnog Balkana leži u poteškoćama s kojima se privatne tvrtke suočavaju u poslovanju poduzeća, odnosno u poslovnom okruženju. Prema podacima najnovijeg izvješća *Transition report 2019-20* (EBRD, 2019), i procjeni položaja zemalja s aspekta 6 poželjnih dimenzija održive tržišne ekonomije – konkurentna (competitive), dobro upravljana (well-governed), zelena (green), uključiva (inclusive), otporna (resilient) i integrirana (integrated) – zemlje Zapadnog Balkana ne mogu se svrstati u kategoriju funkcionirajućih održivih ekonomija (Grafikon 3). Pritom, najproblematičnija područja su u segmentu konkurentnosti i upravljanja. Također, postoji i veliki jaz u kvaliteti između zemalja Zapadnog Balkana i EU11 (tj. zemalja koje su pristupile EU nakon 2004. godine).



**Grafikon 3.** Tranzicijski indikatori za 6 dimenzija održive tržišne ekonomije (podaci iz Transition Report 2019-20)

**Izvor:** Obrada autora prema EBRD (2019).

### 3.1. Opis modela i interpretacija dobivenih rezultata

Ekonometrijskom analizom istražuje se utječu li, te u kojem smjeru, reforme poslovnog okruženja na dinamiku nacionalne konkurentnosti<sup>3</sup>. Za kreiranje reformske variable koriste se podaci Svjetske banke sadržani u okviru *Doing Business*<sup>4</sup> serije izvješća, odnosno bazi koja kvantificira opseg regulatornih prepreka ekonomskom rastu te broj reformi provedenih u pojedinim zemljama. Kreirana je dummy varijabla koja poprima vrijednost 1 ako je zemlja provela reforme koju olakšava poslovanje, te 0 u suprotnom slučaju (prema Haidar, 2012). Procijenjen je panel model s fiksnim efektima koji se općenito može zapisati kao:

$$y_{it} = \alpha + \beta x_{it} + u_i + e_{it} \quad (1)$$

pri čemu je  $y_{it}$  zavisna varijabla (konkurentnost zemalja  $i$  u periodu  $t$  (*indeks globalne konkurentnosti WEF-a*), dok je  $x_{it}$  skup nezavisnih varijabli (lagirana reformska dummy varijabla (*L.reform*), kvaliteta upravljanja (*WGI*), nezaposlenost (*unemp*), produktivnost (*prod*)),  $u_i$  individualna heterogenost te  $e_{it}$  klasično slučajno odstupanje. Prije analize proveden je i test jediničnih korijena (Tablica 1).

**Tablica 1.** Rezultati Levin-Lin-Chu testa za stacionarnost

Nulta hipoteza	Alternativna hipoteza	p-vrijednosti		
		<i>WGI</i>	<i>prod</i>	<i>unemp</i>
Prisutnost jediničnog korijena	Stacionarnost	0.000	0.000	0.028

Izvor: izračun autora

**Tablica 2.** Rezultati modela s fiksnim efektima

<i>L. reform</i>	0.060** (0.023)
<i>WGI</i>	0.705** (0.194)
<i>prod</i>	1.044** (0.377)
<i>unemp</i>	-0.022** (0.009)
Broj opažanja	75
R <sup>2</sup>	0.62
Broj zemalja	7

Napomene: Robusne standardne greške u zagradama;

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; u svrhu ispitivanja robusnosti proveden je model sa fiksnim efektima koji sadrži individualne heterogenosti (country-fixed effects)

Izvor: izračun autora

Dobiveni rezultati prikazani u Tablici 2. potvrđuju da reforme poslovnog okruženja koje olakšavaju uvjete poslovanja imaju pozitivan i statistički značajan učinak na konkurentnost zemalja. Ostale kontrolne varijable su također statistički značajne i imaju očekivani predznak. Preciznije, pokazano je da porast produktivnosti i poboljšanje kvalitete upravljanja imaju pozitivan učinak na konkurentnost dok povećanje stope nezaposlenosti ima negativni učinak. Potrebno je spomenuti da statistički najznačajniji učinak ima kvaliteta upravljanja (*WGI*), odnosno, poka-

<sup>3</sup> Kosovo nije uključeno u model zbog nedostupnosti velikog broja podataka.

<sup>4</sup> <http://www.doingbusiness.org/>.

zuje se da je sustav dobrog upravljanja nužan kako bi se stvorilo i održalo povoljno okruženje za povećanje konkurentnosti i ekonomski napredak. Naime, ponavljanjem istog modela, ali uključivanjem konkretnog broja reformi kao glavne nezavisne varijable od interesa, pokazuje se da u tom slučaju veći broj reformi nema statistički značajan učinak na konkurentnost<sup>5</sup>. Navedeno možemo interpretirati i s aspekta zaključaka Arruñade (2007), koji ističe da mnoge zemlje s ciljem poboljšanja svog ranga na *Doing Business* ljestvici često „uljepšavaju“ funkcioniranje svojih institucija, ali i prebrzo „srljaju“ u reforme. Prema tome, veći broj (bilo kakvih) reformi nije nužno i bolji.

#### 4. ZAKLJUČAK

Rezultati dobiveni provedenom analizom u skladu su s istraživanjima koja ističu da poboljšanje poslovnog okruženja ima pozitivan i statistički značajan učinak na konkurentnost u analiziranim zemljama. Međutim, ono što se pokazalo značajnijim od samog provođenja reformi je kvaliteta upravljanja (koja između ostalog obuhvaća vladavinu prava, kontrolu korupcije i političku stabilnost), odnosno institucionalnog okruženja u kojem se provedene reforme moraju i implementirati, a ne ostati samo slovo na papiru. S druge strane, vrlo često se unatoč jasnoj potrebi za njihovim provođenjem, reforme odgađaju zbog njihove neizvjesnosti, posebno po pitanju ekonomskih i/ili političkih troškova. S obzirom da su priroda i međuveze reformi i konkurentnosti suviše složene, za buduće istraživanje je potrebno ispitati potencijalne političko-ekonomske čimbenike reformi u promatranom uzorku zemalja. Također, neka od pitanja koja ostaju otvorenima su: imaju li reforme pojedinačnih elemenata poslovnog okruženja jednaku važnost ili su neki važniji od drugih, kojim aspektima okruženja treba dati prioritet te koja je uloga vremenskog određenja u implementaciji određenih reformi.

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# VAŽNOST RAZVIJANJA DIGITALNE MARKETING STRATEGIJE

## THE IMPORTANCE OF DEVELOPING A DIGITAL MARKETING STRATEGY

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DOI:

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**Sažetak:** *Direktni marketing putem digitalnih medija stvara dodatne vrijednosti kako za same potrošače tako i za poduzeća i ostvarenje njihovih poslovnih ciljeva jer je usmjeren prema ciljanim skupinama potrošača. Ciljana promocija omogućava da marketinška poruka stigne do ciljane skupine potrošača kao i mjerenje učinkovitosti marketinške poruke kroz odaziv te stvaranje baza podataka o potrošačima i njihovim potrebama i željama. Jedinstveni pristup potrošačima uz primjenu moderne tehnologije za komunikaciju s potrošačima važni su ne samo za razumijevanje potrošačevih potreba i želja i razvijanje odnosa nego i za pozicioniranje i diferencijaciju proizvoda ili usluge u odnosu na konkurenciju, kreiranje superiornih ponuda kao i prilagođavanje promjenama u okruženju.*

*U radu su prikazani modeli komunikacije sa krajnjim potrošačima kroz direktni i digitalni marketing kao i važnost razvijanja digitalne marketing strategije za poduzeća za uspješnost i unapređenje poslovanja.*

**Ključne riječi:** *direktni marketing, digitalni marketing, marketing strategije.*

**Abstract:** *Direct marketing through digital media creates additional value for both, consumers and businesses and the achievement of their business goals because it is targeted at certain consumer groups. Targeted promotion allows the marketing message to reach the target group of consumers, as well as measuring the effectiveness of the marketing message through response, and the creation of databases on consumers and their needs and desires. A unique approach to consumers with the use of modern technology for communication with consumers is important not only for understanding the consumer's needs, desires or for developing relationships, but also for positioning and differentiating a product or service in relation to competition, creating superior offers and adapting to changes in the environment.*

*The paper presents models of communication with end consumers through direct and digital marketing as well as the importance of developing a digital marketing strategy for businesses for business success and improvement.*

**Keywords:** *direct marketing, digital marketing, marketing strategies.*

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### 1. UVOD

„**D**igitalna priroda interneta i drugih tehnologija omogućava znatno opsežniji i detaljniji uvid u obilježja potrošača i njihovo ponašanje u elektroničkom okruženju. Baze podataka i tehnologije za kontakt s potrošačima (Internet, mobilna telefonija i sl.) omogućavaju lakšu

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identifikaciju pojedinačnih potrošača, preciznu segmentaciju i ciljanje potrošača te prilagodbu svih marketinških aktivnosti (ponuda, cijena kanala prodaje i distribucije, komunikacije) pojedinačnim potrošačima (Škare, 2011., p. 2).“

Kreiranjem baza podataka o kupcima i njihovim potrebama i željama poduzeća kreiraju svoje ponude, identificiraju segmente tržišta na kojima će djelovati i načine na koje će udovoljiti njihovim zahtjevima, odaslati određenu marketinšku poruku i ocijeniti njenu prihvatljivost, utjecati na lojalnost, stvaranje novih vrijednosti, razvijanje dugoročnih odnosa, privlačenje novih potencijalnih potrošača i dr.

Jedinstveni pristup potrošačima uz primjenu moderne tehnologije, razvijanje dugoročnih odnosa, pozivanje na sudjelovanje u kreiranju proizvoda ili usluga, razumijevanje potrošačevih navika i drugo nemoguće je ako poduzeće ne pozna svoje potrošače, nema podatke o njima jer tada ne može razviti ni efikasan direktan marketing za koji su potrebne baze podataka i nužne su za razvijanje odnosa sa kupcima (*Customer relationship managment*) kao i za pozicioniranje i diferencijaciju proizvoda ili usluge u odnosu na konkurenciju. Stvaranje vrijednosti, povećanje lojalnosti, informiranje potrošača, povećanje vidljivosti kao i broja posjeta web stranici, komuniciranje sa potrošačima, optimizacija oglašavanja i drugo samo su neki od ciljeva digitalnog marketinga.

U radu su prikazani modeli komunikacije sa krajnjim potrošačima kroz direktni i digitalni marketing kao i važnost razvijanja digitalne marketing strategije za poduzeća za uspješnost i unapređenje poslovanja.

## 2. DIGITALNI MARKETING I DIGITALNA MARKETING STRATEGIJA

„Strategija je okvir unutar kojega poduzeće djeluje i kojom se definiraju ciljevi koje je potrebno ostvariti u određenom roku, odnosno odrediti nastup na tržištu kako bi se strateške odluke provele u djelo. Iz toga proizlazi da svaka strategija mora biti marketinški orijentirana jer za ostvarenje treba upravljati ciljanim tržištem. Dakle, strategija marketinga fundamentalni je okvir koji obuhvaća sadašnje i planirane ciljeve, iskorištavanje resursa poduzeća te interakciju poduzeća sa tržištem, konkurencijom i ostalim faktorima okružja (Renko, 2009, p.69).“

Strateško razmišljanje je planiranje za budućnost, kontroliranje budućnosti odnosno poduzimanje akcija za pravovremeno reagiranje na promjene iz okruženja. Proaktivno djelovanje koje će iskoristiti prilike iz okruženja u kojem poduzeće djeluje i vlastite unutarnje snage, a minimizirati slabosti i prijetnje iz okruženja potaknut će razvoj proizvoda i prisutnost proizvoda u online okruženju. Osnovne zadaće marketinškog planiranja jesu identifikacija problema i usmjeravanje na prilike formuliranjem strategija i ciljeva te načina za njihovu provedbu i kontrolu kao i alternativnih rješenja za ostvarenje istih. „Holistički pristup internetskom marketingu i njegovo uključivanje u strategiju marketinga poduzeća značajno doprinosi uspješnosti marketinških aktivnosti poduzeća u elektroničkom okruženju (Tiago, Couto, Natario, Braga, 2007)“. U marketing strategiju potrebno je implementirati elemente digitalnog marketinga koji uobičajeno uključuju: optimizaciju stranica za tražilice, sadržajni marketing, kontekstualno oglašavanje, digitalni prikazivački marketing, ponovni marketing, marketing društvenih mreža, you tube i video oglašavanje, marketing elektroničke pošte, mobilni marketing, partnerski marketing, analizu web stranica, strategija i planiranje aktivnosti, upravljanje odnosima sa kupcima kako bi se proizvod/ usluga diferencirao i pozicionirao na online tržištu. „Digitalno doba mijenja brojne

sub elemente marketinškog miksa, no suština uvijek ostaje jednaka, a to je bolje i uspješnije kombiniranje elemenata nego što to uspijeva konkurencija. Ti elementi su:

1. proizvod (ponuda) - digitalne vrijednosti, iskustvo branda;
2. cijena - transparentnost cijena, novi cjenovni modeli;
3. mjesto - novi modeli distribucije;
4. promocija - online promocijski miks, integracija offline i online promocije;
5. ljudi - obučenosť osoblja, znanje korisnika;
6. fizički dokazi (online resursi) - brzina mreže, karakteristike opreme;
7. procesi (website) - optimalizacija procesa kroz website (Ružić, Biloš, Turkalj, 2009, p.72)“.

„Koncept integriranih marketinških komunikacija uključuje koordiniranje svih marketinških komunikacijskih aktivnosti na način da se koriste kombinacije komunikacijskih elemenata s ciljem postizanja sinergijskih učinaka u kreiranju oglasa, analizi tržišta, korištenju medija i kontroli postignutih rezultata. U oblike integrirane tržišne komunikacije koji se proučavaju i primjenjuju ubrajaju se oglašavanje, osobna prodaja, unapređivanje prodaje, odnosi s javnošću, publicitet i izravna tržišna komunikacija. Pet je temeljnih obilježja integrirane tržišne komunikacije: utječe na ponašanje, počinje od potrošača ili potencijalnog kupca, koristi jedan ili sve oblike komunikacije, njome se postižu sinergijski učinci, cilj joj je izgraditi dugoročni odnos s kupcima (Kesić, 2003, p. 29).“

Prvi kontakt sa kupcima u Internet okruženju jest web stranica koja mora biti osnova za razvijanje odnosa sa kupcima, privući ih sadržajno i zainteresirati za tvrtku i proizvod koji ona nudi. Inbound marketing je usmjeren na kvalitetu sadržaja koji će privući posjetitelje stranice, pretvoriti ih u potencijalne kupce, potaknuti ih na donošenje odluke o kupnji kao i održavati odnose sa kupcima. „Content marketing dio je Inbound marketinga čija se metodologija temelji na privlačenju potencijalnih klijenata i konvertiranje istih u stvarne klijente i promotore branda (Akrap, 2009)“. Njegova svrha je stvaranje vrijednosti za kupca, davanje odgovora na pitanja korisnika, edukacija kako bi se kupcu olakšalo donošenje njegove odluke, privlačenje kupaca i razvijanja odnosa i drugo s ciljem povećanja prodaje, stvaranja svjesnosti o proizvodu i brandu, integracija marketinških distribucijskih kanala, komunikacija s kupcima kroz izgradnju povjerenja i stvaranja zadovoljstva.

### 3. DIREKTNI MARKETING

„Digitalna priroda interneta i drugih tehnologija omogućava znatno opsežniji i detaljniji uvid u obilježja potrošača i njihovo ponašanje u elektroničkom okruženju. Baze podataka i tehnologije za kontakt s potrošačima (Internet, mobilna telefonija i sl.) omogućavaju lakšu identifikaciju pojedinačnih potrošača, preciznu segmentaciju i ciljanje potrošača te prilagodbu svih marketinških aktivnosti (ponuda, cijena kanala prodaje i distribucije, komunikacije) pojedinačnim potrošačima (Škare, 2011, p.2)“. Prema definiciji američkog udruženja direktnog marketinga DMA (Direct Marketing Association), „direktni je marketing interaktivan sustav koji se koristi jednim ili više medija za oglašavanje da bi se utjecalo na mjerljiv odgovor i/ili transakciju na bilo kojoj lokaciji. U suštini ovaj tip marketinga predstavlja kombinaciju tri marketing strategije: ekonomska propaganda, unaprjeđenje prodaje i istraživanje tržišta (Previšić, Ozretić Došen, 2014).“

Obrada podataka u digitalnom obliku, multimedijalnost, interaktivnost kroz dvosmjernu komunikaciju, kreativno kreiranje sadržaja, povezivanje raznih informacija samo su neka od obilježja medija u elektroničkom okruženju. Baze podataka o potrošačima i njihovim obilježjima postaju

neizostavan dio u segmentaciji online tržišta kao i razvijanju proizvoda i usluga za ciljno tržište. Trgovanje podacima i bazama podataka o potrošačima - data mining postaje važan resurs za oblikovanje poslovanja u virtualnom okruženju. Kupnjom sekundarnih podataka poslovni subjekti koriste već pripremljene, dostupne podatke za oblikovanje prema svojim potrebama kako bi odaslali poruke prema ciljnom segmentu. Izravno obraćanje i dijeljenje informacija o proizvodima i uslugama direktnim marketingom omogućava ostvarenje povećanja prodaje i informiranje ciljne skupine, razvijanje odnosa uz stvaranje lojalnosti i branda, stvaranje svjesnosti o markama, kreiranje personaliziranih poruka i interaktivnost uz optimiziranje troškova, mogućnost analize promotivnih kampanja uz odazivnost na iste, kreiranje posebnih ponuda prema zahtjevima potrošača kao i selektivnost potencijalnih kupaca i dr.

„Dobar marketing nikako nije slučajnost, nego rezultat pažljivog planiranja i provedbe uz pomoć najmodernijih instrumenata i tehnika. To je istovremeno i umjetnosti i znanost jer marketinški stručnjaci pokušavaju pronaći nova kreativna rješenja za često složene izazove koje pred njih postavljaju duboke promjene u marketinškom okruženju 21. stoljeća (Kotler, Keller, 2014, p. 535)“. „Interaktivni marketing predstavlja integrirani proces kojeg organizacije koriste kako bi razumjele ponašanje potrošača, tehnologiju i ostale resurse u cilju stvaranja i upravljanja vrijednošću za potrošača i odnosima s potrošačima čime povećavaju vrijednost za uključene strane kroz relevantne marke, proizvode/usluge, ideje i poruke komunicirane i isporučene ciljanim potrošačima putem odgovarajućih kanala i u odgovarajuće vrijeme (Shankar, Malhotra, 2006)“.

#### **4. UTJECAJ DIGITALNE TEHNOLOGIJE NA NAVIKE POTROŠAČA**

„Na ponašanje potrošača utječu i novi trendovi u ponašanju ljudi općenito, tehnološki pronalasci i kroskulturni transfer ponašanja. Stoga je na marketinškim stručnjacima da pažljivo prate sve promjene okruženja i potrošača koji će rezultirati u promjenama ponašanja njihova ciljnog segmenta (Kesić, 1999, p.4)“. Demografske varijable opisuju karakteristike pojedine grupe potrošača važne za segmentaciju tržišta kao što su dob, spol, prihodi, zanimanje, obrazovanje, veličina kućanstva i drugo. U okviru demografske segmentacije, a s obzirom na vrijeme u kojem su potrošači rođeni i obilježja toga vremena koja su utjecala na njihovo potrošačko ponašanje i stil života često se generacijski potrošači dijele na generaciju: veterana (rođeni do 1946.godine), Baby Boomers-e (rođeni između 1946. i 1960.godine), generaciju X (rođeni između 1961. i 1980. godine), generaciju Y ili generacija Milenijalaca (rođeni između 1981. do 1995. godine), generaciju Z (rođeni između 1995. godine do 2010.) i Alpha generacija (rođeni od 2010.). „Karakteristike, stilovi života i stavovi generacije X uključuju ravnotežu u obitelji, životu i radu i upravo zbog toga žele proizvode i usluge dizajnirane za njihov stil života koji uključuju informacije i tehnologiju (Williams, 2011, p. 6,7)“. Ipak, oni koji ih polagano zamjenjuju su pripadnici generacije Y. „Pripadnici te generacije su brži od svojih starijih kolega iz X generacije jer koriste modernu tehnologiju ne samo u svakodnevnom radu, već i u životu (Jovanovski, 2012, p. 122)“.

Utjecaj i razvoj tehnologije kao i suvremeni stil života mijenja i navike potrošača koji sve više kupuju online i tradicionalne prodavaonice zamjenjuju online trgovinama. Razvijanje posebnosti poslovanja u online okruženju uz praćenje trendova kao i konkurencije te određivanje ciljnih tržišta i djelovanjem specifičnog marketing miksa prilika su za ostvarenje konkurentске prednosti, pozicioniranje i diferencijaciju na online tržištu. „Aktivna online kupovina zajedno s niskim poštovanjem može voditi do sklonosti prema kompulzivnoj online kupovini. Osim toga, kompulzivni su potrošači ovisniji o online kupovini od ostalih potrošača, a strast, koja se vezuje uz kompulzivno kupovno ponašanje, može voditi i online kupovnoj ovisnosti (Matić, Vojvodić,

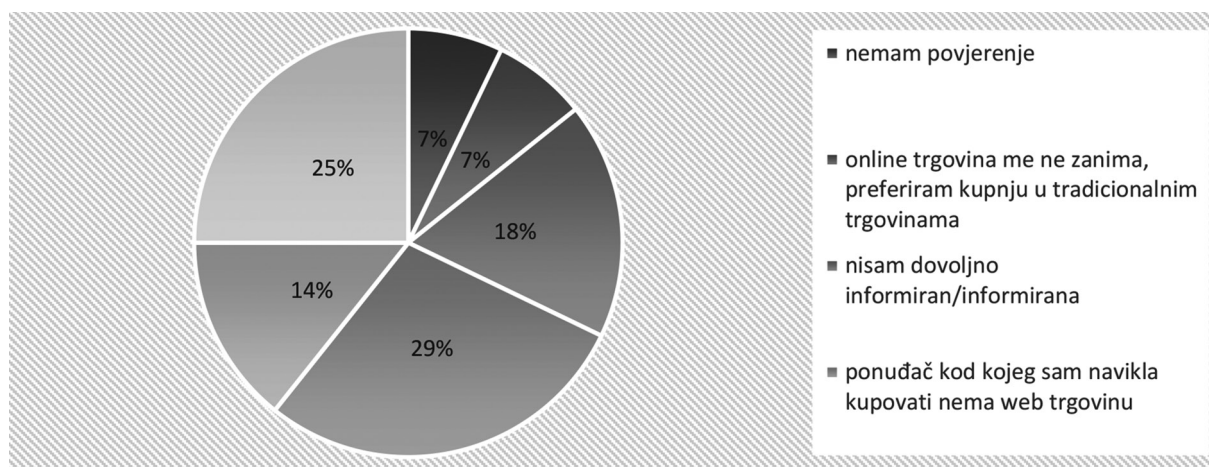
2015, p. 174).“ Glavna razlika između planirane i impulzivne kupovine je u tome koliko često i koliko kvalitetno kupac analizira informacije o proizvodu prije same kupovine kao i u vremenu koje protekne otkad kupac vidi proizvod i kupi ga (Kesić, 2006, p. 345).“

Razvijanje digitalne marketing strategije za osvajanje kupaca na online tržištu, osvajanje tržišnog udjela, pozicioniranje, povećanje vrijednosti branda, upoznavanje kupaca i određivanje segmenta prema principima zasebnosti, mjerljivosti, dostupnosti, profitabilnosti i operativnosti te ostvarenje postavljenih poslovnih ciljeva i oblikovanja strategije marketing miksa s planiranim aktivnostima i ciljevima i načinima oglašavanja postaje neizostavan dio marketinškog planiranja.

## 5. ISTRAŽIVANJE O KOMUNIKACIJI SA POTROŠAČIMA PUTE M INTERNETA

Rezultati provedenog istraživanja o komunikaciji sa potrošačima kroz direktni i digitalni marketing u Republici Hrvatskoj u vremenu od 1. do 10. ožujka 2020. godine prikazani su tablično i grafički uz koje slijedi interpretacija rezultata. U istraživanju je sudjelovalo 71 ispitanik/a od toga 43 žene (61%) i 28 muškaraca (39%). U dobi od 20 do 30 godina sudjelovalo je 25 ispitanika što je ujedno i najveći broj ispitanika, odnosno 35%, slijedi 16 (23%) ispitanika u dobi od 31 do 40 godina, te 20 (28%) ispitanika u dobi od 41 do 50 godina te od 51 do 60 godina 10 ispitanika odnosno 14%. S obzirom na stupanj obrazovanja 15 ispitanika (21%) ima završeno srednjoškolsko obrazovanje (SSS), 18 ispitanika (26%) je sa završenom višom stručnom spremom (VŠS), 25 ispitanika (35%) ima visoku stručnu spremu (VSS), a 13 ispitanika (18%) ima magisterij ili doktorat znanosti (mr. sc./dr.sc.). Zaposleno je 52 (73%) ispitanika dok je 19 (27%) ispitanika nezaposleno.

Prvo pitanje u anketnom upitniku odnosilo se na kupnju putem interneta. Od 71 ispitanika njih 43 odnosno 60 % redovito ili ponekad kupuje putem Internet trgovina, a 28 ispitanika odnosno 40% ne koristi Internet trgovine. Kao razlog ne korištenja Internet trgovine, ispitanici navode brojne razloge, a struktura odgovora prikazana je Grafikonom 1.

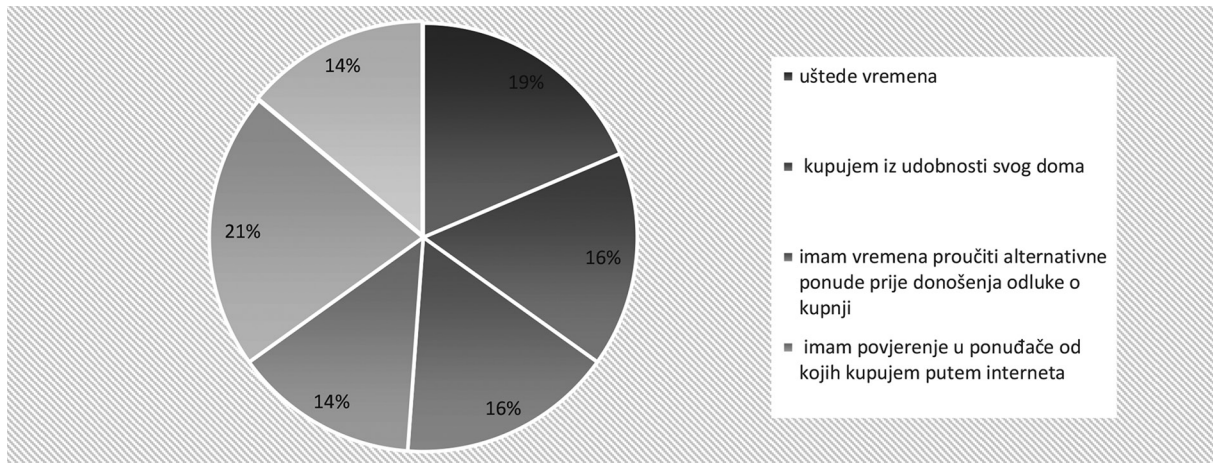


**Grafikon 1.** Razlozi ne korištenja Internet trgovine

Izvor: izrada autora

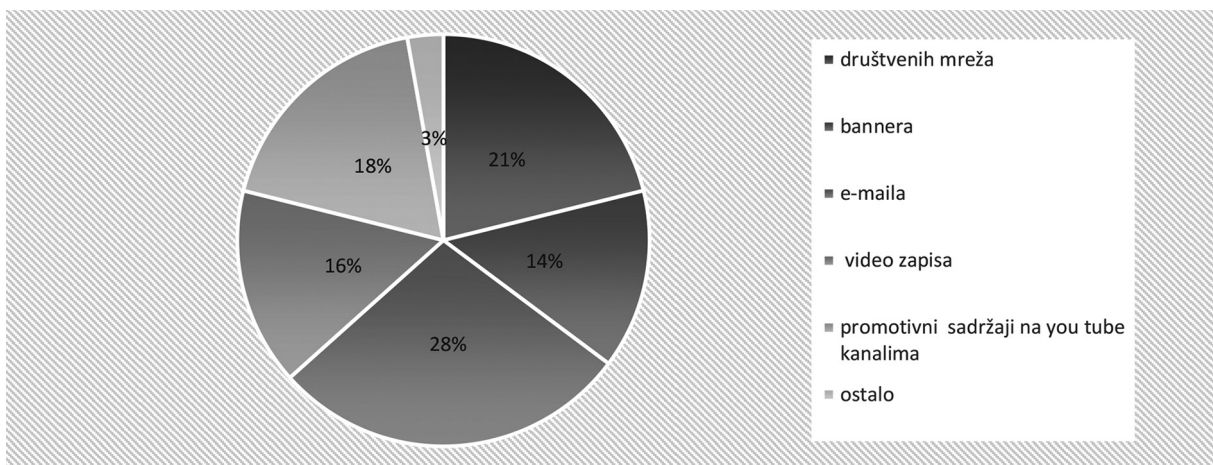
Grafikonom 2. prikazana je struktura odgovora ispitanika koji kupuju putem interneta. 60 % ispitanika kupuje putem Internet trgovine uvijek ili ponekad, a kao glavne razloge navode: uštedu vremena, ponudu proizvoda kojih nema u njihovoj blizini, kupnju iz udobnosti doma, priliku za detaljno istraživanje ostalih ponuda, ostvarivanje pogodnosti i dr.

Kada je u pitanju oglašavanje na internetu različitih proizvoda ispitanici navode da ih najviše privlače oglasi i obavijesti putem e-maila (28%), putem društvenih mreža (21%), promotivni sadržaji putem you tube kanala (18%), video zapisa (16%), banjera (14%) i ostalo 3% ispitanika. Struktura odgovora prikazana je Grafikonom 3.



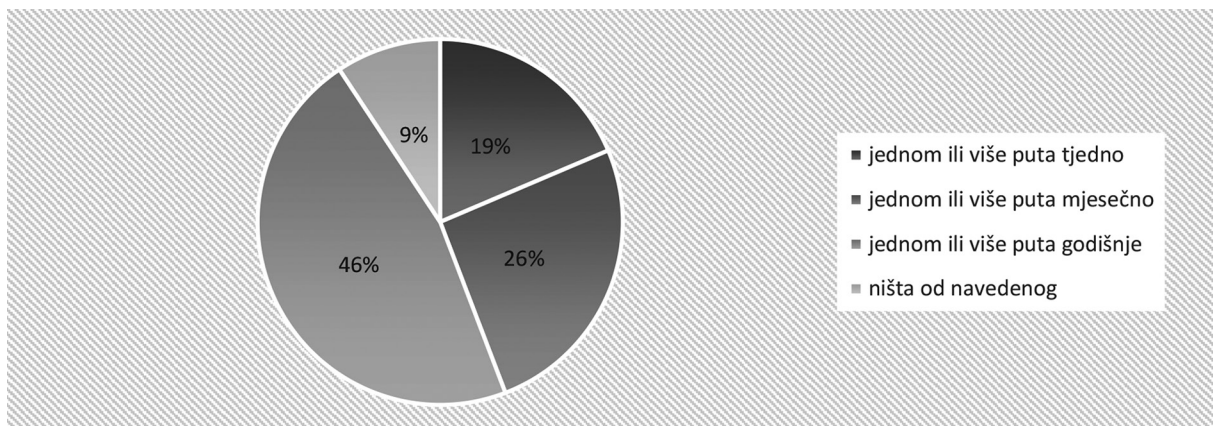
**Grafikon 2.** Razlozi kupovine putem interneta

Izvor: izrada autora



**Grafikon 3.** Privlačnost raznih oblika oglašavanja na internetu

Izvor: izrada autora



**Grafikon 4.** Privlačnost oglasa i poticaj na kupnju

Izvor: izrada autora

Posljednje pitanje u upitniku odnosilo se na zanimljivost oglasa koji je ispitanike potaknuo da pregledaju web stranicu ponuđača i potaknuo ih na kupnju. Učestalost takve kupnje i struktura odgovora prikazana je Grafikonom 4.

## 6. ZAKLJUČAK

Razvijanje poslovanja putem interneta, osvajanje kupaca, segmentacija kao i pozicioniranje na ciljnim tržištima u elektroničkom okruženju svakim danom sve više dobivaju na značaju. Istraživanje koje je provedeno bilo je netom prije donošenja odluke Vlade Republike Hrvatske i Nacionalnog stožera civilne zaštite o mjerama ograničavanja društvenih okupljanja, rada u trgovini, uslužnih djelatnosti i održavanja sportskih i kulturnih aktivnosti, a koje su vezane uz put prijenosa bolesti COVID-19.

Nitko nije mogao ni zamisliti da će se uobičajeno poslovanje preko noći zaustaviti i da će se većina poslovanja odvijati online i od kuće. Poslovni subjekti više ne mogu uobičajeno poslovati te su svi koji su mogli prilagodili svoje poslovanje i prenijeli ga u digitalno okruženje. Razvijaju se Internet trgovine, poboljšava ponuda proizvoda, oglašava se na društvenim mrežama, bannerima, direktnim marketingom putem maila kako bi se na bilo koji način spasilo što se spasiti može, održalo poslovanje i radna mjesta. Potrošači mijenjaju svoje navike i oni koji nikada nisu kupovali i imali su ne povjerenje prema Internet trgovini postaju online kupci.

Suvremeni način života, promijenjene životne navike i stil života potrošača zahtijevaju stvaranje vrijednosti za potrošača kroz jedinstven pristup i razvijanje odnosa kroz dostupnost s bilo kojeg mjesta i u bilo koje vrijeme uz primjenu moderne tehnologije.

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# ZNAČAJ PROMOCIJE ZA POZICIONIRANJE TURISTIČKIH DESTINACIJA KONTINENTALNOG TURIZMA

## THE IMPORTANCE OF PROMOTION FOR POSITIONING CONTINENTAL TOURIST DESTINATIONS

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DOI:

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**Sažetak:** Promicanje tradicije, običaja, lokalnih događanja, gastronomije, kulturne baštine, autohtonih sela, obiteljskih gospodarstava, prikaza tradicionalnog života na selu, održivog korištenja prirodnih resursa kao i očuvanje lokalnog identiteta okosnica su razvoja turizma u kontinentalnom dijelu.

Promotivne aktivnosti imaju ključnu ulogu u stvaranju prepoznatljivog imidža određene destinacije, a jedna od glavnih zadaća je informirati i utjecati na stvaranje pozitivnih preferencija te utjecati na potražnju za određenom destinacijom odnosno uslugom. Uz samu ponudu određene destinacije ključnu ulogu na stvaranje doživljaja imaju ljudi odnosno pružena usluga koja je temelj za izgradnju emotivne (doživljajne) komponente putovanja i pozicioniranje određene turističke ponude na turističkom tržištu.

U radu su prikazani rezultati istraživanja u Republici Hrvatskoj o motivima odabira odmora u kontinentalnom dijelu, načinu dobivanja informacija, dužini boravka kao i zadovoljstvu posjetitelja turističkom ponudom i uslugom.

**Ključne riječi:** promocija, turistička destinacija, pozicioniranje, kontinentalni turizam, Republika Hrvatska.

**Abstract:** Promoting traditions, customs, local events, gastronomy, cultural heritage, indigenous villages, family farms, depicting traditional rural life, sustainable use of natural resources, and preserving local identity are the backbone of tourism development in the continental region.

Promotional activities play a key role in creating a recognizable image of a particular destination, and one of its main tasks is to inform and influence the creation of positive preferences and to influence the demand for a particular destination or service. Along with the offer of a particular destination, the key role in creating an experience is played by the people, in other words the service provided, which is the basis for building the emotional (experiential) component of travel and positioning a particular tourist offer in the tourist market.

The paper presents the results of the research in the Republic of Croatia on the motives for choosing a vacation in the continental part, methods of obtaining information, length of stay, as well as visitor's satisfaction with the tourist offer and service.

**Keywords:** promotion, tourist destination, positioning, continental tourism, Republic of Croatia.

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## 1. UVOD

„Kontinentalni turizam odvija se najvećim dijelom kroz agroturizam, seoski turizam, ruralni turizam i održivi turizam, a to: doprinosi očuvanju prirodne i kulturno povijesne baštine receptivne sredine, sprječava iseljavanje iz tzv. pasivnih krajeva te potiče revalorizaciju

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autohtonih vrijednosti receptivnog kraja (Krajnović, Čičin Šain, Predovan, 2011, p. 31)“. Prema Ružiću (2012) ruralni turizam je „vrsta turizma razvijena na prostoru izvan gradskih središta za koje je karakteristično obilje prirodnih i društvenih posebnosti, na kojem živi mali broj stanovnika s dominantnim korištenjem zemljišta za poljoprivrednu proizvodnju i na kojem su društvena struktura i običaji dijelom sačuvani“(p. 217).

„Prema klasifikaciji UNWTO turistički resursi se mogu podijeliti na: prirodne turističke resurse, kulturno povijesnu baštinu, klimatske uvjete, infrastrukturu, turističke usluge i sadržaje“ (Geić, 2011, p.104). Turisti koji sve više cijene autentičnost, raznolikost ponude (diferencijaciju), posebne doživljaje tijekom putovanja koji se ostvaruju kroz prikaze tradicionalnog života na selu, gastronomiju, kulturnu baštinu, promicanje tradicije i običaja kao i očuvanje okoliša i društvene osviještenosti i drugo odabrat će za svoj odmor destinaciju kontinentalnog turizma. „Ruralni turizam nastoji posjetiteljima omogućiti personaliziranu uslugu, što više im približiti fizičke i ljudske aktivnosti ruralnog područja te im omogućiti sudjelovanje u aktivnostima i načinu života lokalnog stanovništva“ (Bartoluci, Hendija, Petračić, 2015., p.198).

S obzirom da je zadaća marketinga stvaranje vrijednosti i orijentiranost na potrebe i želje upravljanje marketingom u ovom segmentu mora imati ključnu ulogu u stvaranju prepoznatljivog imidža određene destinacije. Jedna od glavnih zadaća je informirati i utjecati na stvaranje pozitivnih preferencija, a samim time i na potražnju za određenom destinacijom odnosno uslugom s obzirom da se pomoću promocije određene destinacije stvara slika o samoj ponudi što u konačnici utječe na konačnu odluku i odabir same destinacije i turističkog proizvoda. Možemo reći da je: “za jedne turizam način ugodnog provođenja slobodnog vremena, rekreacija, odmor, zabava, uživanje, bavljenje sportom, liječenje, za druge to su dodiri kultura, interkulturalno razumijevanje, interpersonalni odnosi, učenje, obrazovanje i promjena ponašanja, bolje razumijevanje među ljudima i njihovim kulturama“ (Jagić, 2005).

## **2. ULOGA I ZADACI PROMOCIJE**

Pod pojmom marketinga u turizmu podrazumijeva se „sustavno i koordinirano djelovanje, izvršavanje zahtjeva i ciljeva turističke politike, kojom se na najbolji mogući način zadovoljavaju turističke potrebe određenih skupina korisnika (i pojedinaca) uz istodobno postizanje pozitivnih ekonomskih rezultata za nosioce turističke ponude, odnosno nosioce marketinga“ (Senečić, Vukonić, 1997., p.40).

Stvaranje vrijednosti kroz koncepciju marketinga podrazumijeva segmentiranje tržišta i odabir ciljnog tržišta za pozicioniranje vrijednosti ponude kao i pružanje vrijednosti tržištu putem razvoja elemenata marketing miksa odnosno proizvoda ili usluga, cijena, distribucije te prenošenja poruka putem promocije kako bi se ostvarili poslovni ciljevi, orijentiranost na potrošača i stvaranje vrijednosti za potrošača kroz zadovoljenje njegovih potreba i želja uz koordinaciju svih poslovnih aktivnosti nositelja turističke ponude sa ciljevima turističke destinacije. Upravljanje turizmom u destinacijama danas u određenoj mjeri provodi javni sektor, ponajprije sustav turističkih zajednica te ostali javni sektor. Turističke zajednice svoje programe rada u 2020. godini temelje na zakonima iz 2019., odnosno Zakonu o turističkim zajednicama i promicanju hrvatskog turizma (NN 52/2019), Zakonu o turističkoj pristojbi (NN 52/2019) i Zakonu o turističkoj članarini (NN 52/2019) koje prate smjernice „Strateškog marketinškog plana turizma Hrvatske 2014.- 2020.“ Nositelj ponude jest privatni sektor dok su turističke zajednice do sada ponajviše bile fokusirane na promotivne aktivnosti, informiranju turista u destinacijama

te organiziranju manifestacija i događaja. „Marketing u turizmu je sustavno i koordinirano prilagođavanje politike turističkih poduzeća i turističke politike, na lokalnom, regionalnom, nacionalnom i međunarodnom nivou, da bi se postiglo optimalno zadovoljenje potreba određenih skupina potrošača i tako ostvarilo profit“ (Senečić, Vukonić, 1997. p. 38).

„Promocija u turizmu ima mnoge zadaće pa se kao osnovne mogu izdvojiti sljedeće: informirati turističke korisnike o prisutnosti određenog turističkog proizvoda na tržištu, upoznati turiste s obilježjima i prednostima turističkog proizvoda, mnogim konkretnim informacijama omogućiti turistu da se lakše odluči, najprije o uključivanju u turistička kretanja, a zatim o izboru proizvoda, vremenu njegova korištenja i dr., stvoriti, osigurati ili održati pozitivni imidž na turističkom tržištu, projicirati određenu tržišnu poziciju, promovirati željeno ponašanje turista, promijeniti stavove, stimulirati želju, pomaknuti vrijeme kupnje (produžiti sezonu) i dr.“ (Križman Pavlović, 2008., p. 156). „Osnovni problem ruralnih destinacija je njihova usitnjena, atomizirana ponuda. Umjesto da se privatni poduzetnici udruže u promociji turističke destinacije, oni iz straha od konkurencije nastupaju sami na turističkom tržištu i sami plasiraju svoje proizvode i/ili usluge. Zbog toga je za razvoj ruralnog turizma izuzetno važno razvijati integrirani ruralni proizvod, investirati u obrazovanje lokalnog stanovništva i provesti zajednički marketing ruralnih područja“ (Lebe, Milfelner, 2006., p. 1141).

### 3. KONCEPT DOŽIVLJAJA

Koncept doživljaja u marketingu predstavlja posebnu ekonomsku ponudu koja podrazumijeva učenje tijekom vremena kada je potrošač u interakciji s različitim elementima okruženja kreiranim od strane uslužitelja. Potrošači nastoje biti pod utjecajem nečega pozitivno emocionalnog i vrijednog njihovog vremena. Doživljaji nastaju kao rezultat traganja, izrade scenarija i njegove izvedbe, a može se odnositi na senzacije ili stjecanje znanja na osnovu osobnog sudjelovanja potrošača u aktivnostima. Kako bi se kreirala održiva konkurentska prednost, neophodno je za svakog potrošača proizvesti distinktivne osobne i emocionalne doživljaje.

„Ponuda ruralnih destinacija treba predstavljati „užitak za dušu“ (vrtovi s obiljem cvijeća, uređene zelene površine i sl.)“ (Lebe, Milfelner, 2006., p. 1138). Implementacija brenda kroz koncept doživljaja počinje u fazi razmišljanja o putovanju kada se temeljem promocijskih materijala bira destinacija i donosi odluka preko planiranja putovanja do boravka u destinaciji i prenošenja iskustava. U fazi razmišljanja i planiranja putovanja ključni su elementi promocije turističkih destinacija koji trebaju prenijeti sliku doživljaja, potaknuti emociju i motivaciju dolaska kako bi se upoznale lokalne vrijednosti kontinentalne destinacije. Boravkom u destinaciji isporučuje se sve obećano kroz promocijske materijale, stvaraju doživljaji i iskustva, sjećanja, koja se dalje prenose raznim oblicima komunikacije (društvene mreže, web stranice, forumi i dr.). Zadovoljstvo posjetom rezultat je ispunjenja obećanja iz promocijskih poruka, a koje su usmjerene na upoznavanje lokalnih vrijednosti i učenje te usvajanje novih spoznaja.

Što se tiče prezentacije poruke ekonomske propagande, svaka se poruka može prenijeti jednim od sljedećih izvedbenih stilova poruke: isječak iz života (prikazuje jednu ili više osoba koje se koriste određenim, proizvodom/uslugom u uobičajenim prigodama), stil življenja (prikazuje kako se proizvod uklapa u određeni stil života), mašta (stvara se čudesan svijet oko proizvoda ili njegova korištenja), ugođaj ili slika (stvara se ugođaj ili slika vezana uz proizvod kao što je ljepota, ljubav ili mirnoća, a informacije se prenose isključivo sugestijom), mjuzikl (jedan čovjek ili više ljudi ili animiranih likova pjevaju pjesmu o proizvodu), simbol osobnosti (kreira se lik koji reprezentira

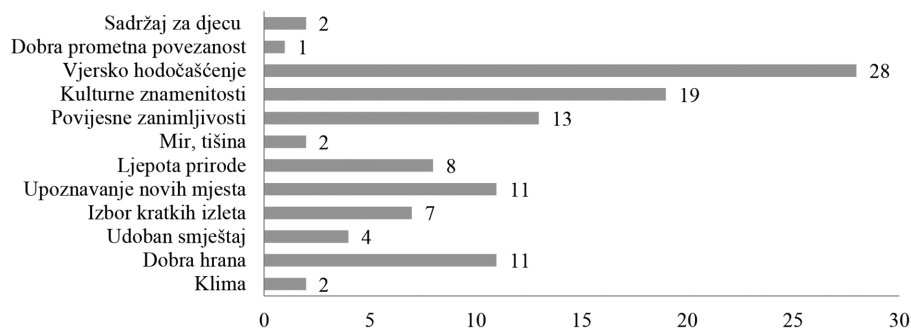
određeni proizvod), tehnička stručnost (prezentira se stručna kompetentnost poduzeća u svezi s vlastitim proizvodom ili uslugom), znanstveni dokaz (koriste se rezultati testova i istraživanja koji dokazuju superiornost proizvoda ili usluge), iskaz svjedoka (koriste se poznate osobe da potvrde vjerodostojnost i privlačnost proizvoda ili usluge) (Kotler, 2001., p. 572.).

Prema Strategiji razvoja turizma Republike Hrvatske do 2020. godine „za razvoj pojedinih proizvoda od izuzetne je važnosti osigurati suvremenu i inovativnu komunikaciju s tržištem, što se prije svega odnosi na bitan iskorak u e-marketingu, odnosno unapređenje online informacijsko-prodajnih portala ponuđača usluga i destinacija (npr. kontinuirani rad na sadržaju, usmjerenje prema ciljnim potrošačkim segmentima, doživljajan prikaz ponude, unapređenje web 2.0 funkcionalnosti, optimizacija portala prema tražilicama), intenziviranje mogućnosti online kupnje i/ili rezervacije usluga (npr. smještaja, izleta, karata za događanja) na destinacijskim portalima te intenziviranje razvoja CRM sustava na razini ponuđača usluga i na razini destinacija (npr. tematizirani newsletteri, informacije prije i nakon puta)“ (p. 37).

#### 4. ISTRAŽIVANJE

Rezultati provedenog istraživanja o motivima odabira odmora u kontinentalnom dijelu, načinu dobivanja informacija, dužini boravka kao i zadovoljstvu posjetitelja turističkom ponudom i uslugom u Republici Hrvatskoj prikazani su tablično i grafički uz koje slijedi interpretacija rezultata. U istraživanju je sudjelovalo 108 ispitanika od toga 52 žene (48%) i 56 muškaraca (52%). U dobi od 31 do 45 godina sudjelovao je 51 ispitanik što je ujedno i najveći broj ispitanika, odnosno 47%, slijedi 34% ispitanika u dobi od 46 do 60 godina te 19 (18%) ispitanika starije dobi od 18 do 30 godina te jedan ispitanik u dobi od 61 i više godina. S obzirom na stupanj obrazovanja najviše ispitanika ima završeno srednjoškolsko obrazovanje 49,1% (53 ispitanika), 37 ispitanika odnosno njih 34,3% ima višu stručnu spremu, visoku stručnu spremu ili magisterij ima 13 ispitanika ili 12%. Osnovnoškolsko obrazovanje ima 4 ispitanika ili 3,7%, a najmanje ispitanika ima doktorat, odnosno 1 ispitanik ili 0,9%.

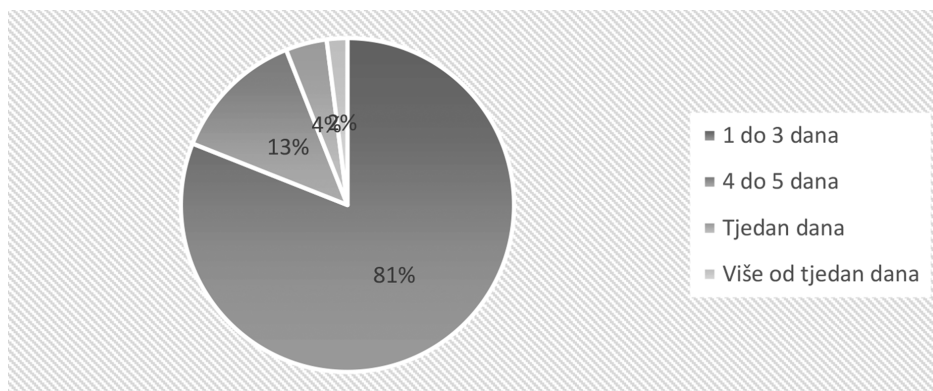
Prvo pitanje u anketnom upitniku glasilo je: „Koji su motivi odabira turističkih destinacija kontinentalnog turizma za Vaše putovanje?“, a rezultati istraživanja prikazani su Grafikonom 1. Najčešći motivi posjeta turističkim destinacijama kontinentalnog turizma je vjersko hodočašćenje za 28 ispitanika (26%), kulturne znamenitosti za 19 ispitanika (17%) ispitanika, povijesne znamenitosti za 13 ispitanika (12%), 11 ispitanika (7%) preferira upoznavanje novih mjesta i dobru hranu, dok je klimu, mir i tišinu te sadržaj za djecu odabralo 6 ispitanika. 11 ispitanika navelo je kao motiv dolaska dobru hrane odnosno gastronomsku ponudu, dok 4 ispitanika pak smatra glavnim motivom dolaska udoban smještaj.



**Grafikon 1.** Motivi odabira turističkih destinacija kontinentalnog turizma za putovanje

**Izvor:** obrada autora prema ispunjenim anketnim upitnicima

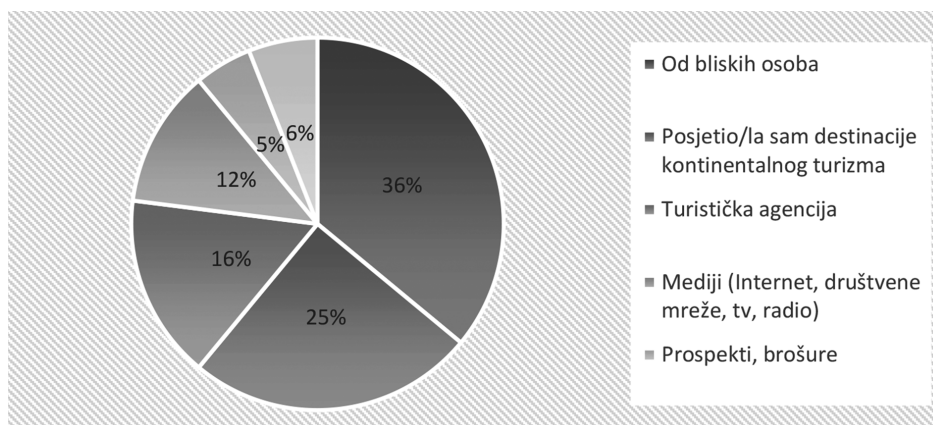
Iduće pitanje odnosilo se na dužinu boravka u odabranoj turističkoj destinaciji kontinentalnog turizma. Prema strukturi odgovora iz Grafikona 2. vidljivo je da je najveći broj ispitanika odnosno njih 81% boravio od 1 do 3 dana, 13 % ispitanika boravilo je 4 do 5 dana, a svega 4% ispitanika tjedan dana. Više od tjedan dana boravilo je svega 2% ispitanika.



**Grafikon 2.** Dužina boravka u odabranoj turističkoj destinaciji kontinentalnog turizma

**Izvor:** obrada autora prema ispunjenim anketnim upitnicima

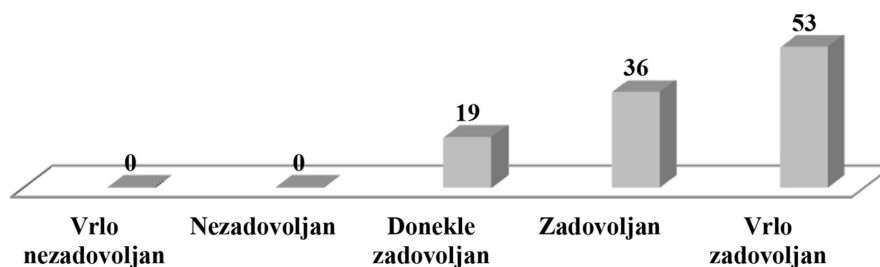
Sljedeće anketno pitanje odnosilo se na informacije koje su utjecale na odabir odmora u turističkim destinacijama kontinentalnog turizma u Republici Hrvatskoj. Grafikonom 3. prikazana je struktura odgovora. 36% ispitanika odabralo je destinacije kontinentalnog turizma na temelju informacija dobivenih od njima bliskih osoba, 25% je već posjetilo određene destinacije kontinentalnog turizma, a 16% ispitanika je dobilo informacije preko turističke agencije. Putem medija (Interneta, društvenih mreža, TV, radio) informacije je dobilo njih 12%. Mali broj ispitanika, odnosno samo 5% informacije je dobilo putem brošura i prospekata. 6% ispitanika informacije su dobili nekim drugim oblikom promocije kontinentalnih turističkih destinacija.



**Grafikon 3.** Utjecaj informacija na odabir destinacija kontinentalnog turizma

**Izvor:** obrada autora prema ispunjenim anketnim upitnicima

S obzirom da turističke destinacije kontinentalnog dijela odlikuje i gastronomska ponuda jedno od pitanja odnosilo na zadovoljstvo gastronomskom ponudom u posjećenim destinacijama. Prema strukturi odgovora prikazanih Grafikonom 4. vidljivo je da je skoro polovica odnosno 49% ispitanika vrlo zadovoljno bogatstvom gastronomske ponude. 36 ispitanika ili 33, 3% je zadovoljno, a 19 ispitanika, odnosno 17, 5% izjasnilo se da je donekle zadovoljno bogatstvom gastronomske ponude.



**Grafikon 4.** Zadovoljstvo bogatstvom gastronomske ponude

Izvor: obrada autora prema ispunjenim anketnim upitnicima

**Tablica 1.** Zadovoljstvo posjeta turističkim destinacijama kontinentalnog turizma

TVRDNJA/PITANJE	Vrlo nezadovoljan	Nezadovoljan	Donekle zadovoljan	Zadovoljan	Vrlo zadovoljan
U kojoj ste mjeri zadovoljni gostoljubivošću stanovništva?	0,93%	1,85%	5,56%	42,59%	49,07%
U kojoj ste mjeri zadovoljni ponudom smještaja?	0,93%	2,78%	22,22%	25,00%	49,07%
U kojoj ste mjeri zadovoljni u odnosu na prometnu dostupnost i povezanost do odabrane turističke destinacije	0,00%	5,56%	16,67%	32,41%	45,37%
U kojoj ste mjeri zadovoljni bogatstvom kulturnih manifestacija?	0,00%	5,56%	16,67%	37,04%	40,74%
U kojoj mjeri ste zadovoljni cjelokupnom kulturnom ponudom odabrane turističke destinacije?	0,00%	1,85%	16,67%	44,44%	37,04%

## 5. ZAKLJUČAK

Nositelji turističkih aktivnosti kontinentalnog dijela su obiteljska poljoprivredna gospodarstva koja kroz stil života koji oni žive nastoje posjetiteljima približiti život, običaje, tradiciju, gastronomiju i dr. što je specifično za njihovo područje kreirajući ponudu i usluge koje su specifične, a koje djeluju na stvaranje doživljaja.

U provedenom istraživanju jedno od glavnih motiva putovanja jest upoznavanje kulturnih i povijesnih znamenitosti kao i vjerska hodočašća, odnosno upoznavanje lokalnih vrijednosti odabrane turističke destinacije u kojoj najviše njih ostaje 1 do 3 dana. Sukladno provedenom istraživanju vidljivo je da je mali broj ispitanika, odnosno samo njih 5% informacije dobilo putem brošura i prospekata, a 6% ispitanika informacije je dobilo nekim drugim oblikom promocije kontinentalnih turističkih destinacija. Najveći broj ispitanika informacije je dobilo od osoba koje su im svoj pozitivan doživljaj i iskustvo posjetom prenijele te ih potaknule na putovanje. Približno polovina ispitanika je zadovoljna gostoljubivošću, ponudom smještaja, dostupnošću, manifestacijama kao i gastronomskom ponudom odabrane turističke destinacije.

Za pozicioniranje na turističkom tržištu potrebno je zajedničko marketinško djelovanje malih obiteljskih gospodarstava koji su nositelji jedinstvene ponude i usluge, a putem integriranog proizvoda i usluga. Samo jedinstvena ponuda proizvoda i usluga i stvaranje prepoznatljivog lokalnog identiteta uz promociju doživljaja koje destinacija nudi može rezultirati povećanom potražnjom za ovim oblikom turizma u kontinentalnom dijelu.

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# KONKURENTNOST KULTURNIH I KREATIVNIH INDUSTRIJA U EU

## COMPETITIVENESS OF CULTURAL AND CREATIVE INDUSTRIES IN THE EU

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**Sažetak:** Sektor kulturnih i kreativnih industrija (KKI) predstavlja jedan od najbrže rastućih sektora europskoga gospodarstva, sa značajnim udjelima u zaposlenosti i BDP-u. Aktivnosti ovoga sektora su većinom vezane za mala i srednja poduzeća, a koja predstavljaju ključne pokretače europskoga gospodarstva. Iz svega navedenoga je vidljivo značenje ovoga sektora za ostvarivanje konkurentnosti na razini EU-a. Problem istraživanja proizlazi iz poteškoća s kojima se KKI sektor suočava na razini EU-a, a koje su posebno vezane za prepreke u zakonodavnom okruženju te izazove digitalizacije. Cilj provedenog istraživanja je prezentirati teorijske aspekte kreativnih i kulturnih industrija u EU te provesti analizu ključnih značajki sektora i čimbenika njegove konkurentnosti. Svrha istraživanja je predložiti znanstveno utemeljene mjere kojima će osigurati daljnji napredak ovoga sektora na razini Unije.

**Ključne riječi:** EU, Kreativne industrije, Kulturne industrije.

**Abstract:** The Cultural and Creative Industries (CCI) sector is one of the fastest growing sectors of the European economy, with significant shares in employment and GDP. The activities of this sector are mostly related to small and medium-sized enterprises, which are key drivers of the European economy. From all the above, the importance of this sector for achieving competitiveness at the EU level is evident. The research problem stems from the difficulties faced by the CCI sector at EU level, which are particularly related to obstacles in the legislative environment and the challenges of digitization. The aim of the research is to present the theoretical aspects of creative and cultural industries in the EU and to analyze the key features of the sector and the factors of its competitiveness. The purpose of the research is to propose science-based measures to ensure the further progress of this sector at union level.

**Keywords:** EU, creative industries, cultural industries.

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### 1. UVOD

Sektor kulturnih i kreativnih industrija (KKI) predstavlja jedan od najbrže rastućih sektora europskoga gospodarstva. EU je prepoznala važnost ovoga sektora te kao misiju odredila unaprjeđenje njegove konkurentnosti, razvoja i ključnih performansi, s krajnjim ciljem doprinosa daljnjem razvoju cjelokupnog europskog gospodarstva. Problem istraživanja proizlazi iz poteškoća s kojima se KKI sektor suočava na razini EU-a, a koje su posebno vezane za prepreke u zakonodavnom okruženju te izazove digitalizacije. Cilj provedenog istraživanja je prezentirati teorijske aspekte kreativnih i kulturnih industrija u EU te provesti analizu ključnih značajki

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sektora i čimbenika njegove konkurentnosti. Svrha istraživanja je predložiti znanstveno utemeljene mjere kojima će osigurati daljnji napredak ovog sektora na razini EU-a.

Rad se sastoji od šest međusobno povezanih poglavlja. Nakon uvodnih razmatranja i definiranja ključnih elemenata istraživanja, rad je nastavljen prezentacijom ključnih teorijskih aspekata kreativnih i kulturnih industrija u EU. Istraživanje je nastavljeno analizom ključnih pokazatelja KKI sektora te prezentacijom mjera nužnih za njegovo unaprjeđenje na razini EU. Istraživanje završava smjernicama za buduća istraživanja te zaključkom, koji predstavlja sintezu ključnih spoznaje provedenoga istraživanja.

## 2. TEORIJSKA UTEMELJENOST KULTURNIH I KREATIVNIH INDUSTRIJA U EU

Određivanja ključnih karakteristika i elemenata KKI sektora je veoma složeno te se pristupi njegova određivanja razlikuju između međunarodnih organizacija. S obzirom na njegovu slojevitost i razlike u definiranju, još uvijek ne postoji jedinstveni pristup. Neki od najvažnijih načina definiranja KKI sektora su analizirani u nastavku rada.

UNESCO (2009) određuje KKI sektor kroz međudjelovanje šest ključnih područja, i to (1) kulturna i prirodna baština; (2) izvedbe i festivali; (3) vizualne umjetnosti i obrti; (4) knjige i izdavaštvo; (5) audiovizualni i interaktivni mediji, te (6) dizajn i kreativne usluge. Nadalje, UNCTAD (2008) definira KKI djelatnosti „kao cikluse stvaranja, proizvodnje i distribucije roba i usluga koje koriste kreativnost i intelektualni kapital kao primarne inpute. Ove djelatnosti obuhvaćaju niz aktivnosti koje intenzivno koriste kreativne vještine i mogu generirati prihode kroz trgovinu i intelektualna vlasnička prava”.

Sustavno izučavanje zakonitosti i karakteristika KKI sektora na europskoj razini započelo je 2006. godine u okviru studije *Ekonomija kulture*, a koja kulturni sektor dijeli na neindustrijski (uže umjetničke djelatnosti) i industrijski dio (kulturni proizvodi za masovnu reprodukciju - film, knjiga itd.). U kreativnom sektoru, kultura postaje kreativni input u proizvodnji ne-kulturnih dobara te uključuje aktivnosti kao što su dizajn, arhitektura i oglašavanje (KEA, 2006). Sve navedeno je prikazano u Tablici 1.

Europska komisija (2010) u Zelenoj knjizi pod naslovom *Oslobađanje potencijala kulturnih i kreativnih industrija* određuje kulturne industrije kao one „koje proizvode i distribuiraju robu ili usluge koje su, tijekom vremena u kojem su razvijene, prepoznate kao one koje posjeduju specifična obilježja, koristi ili svrhu koja utjelovljuje ili prenosi kulturne izraze, bez obzira na komercijalnu vrijednost koju možda imaju. Osim tradicionalnih umjetničkih sektora (izvedbene umjetnosti, vizualne umjetnosti, kulturna baština – uključujući javni sektor), one uključuju film, DVD i video, televiziju i radio, video igre, nove medije, glazbu, knjige i izdavaštvo“. S druge strane, kreativne industrije su određene kao „one industrije koje koriste kulturu kao input i imaju kulturnu dimenziju, iako su njihovi rezultati uglavnom funkcionalni. Kreativne industrije uključuju arhitekturu i dizajn i ostale djelatnosti koje integriraju kreativne elemente u šire procese kao i podsektore poput grafičkog dizajna, modnog dizajna ili oglašavanja“. *Izvještavanje o kretanjima u KKI sektoru na razini EU provodi Europska komisija kroz Europski statistički sustav za kulturu (ESSnet Culture)* (Europska komisija, 2020).

**Tablica 1.** Kulturni i kreativni sektor sukladno studiji „Ekonomija kulture u Europi“

KRUGOVI	SEKTORI	PODSEKTORI	
<b>UŽE UMJETNIČKO PODRUČJE</b>	Vizualne umjetnosti	Obrti, Slikarstvo, Skulptura, Fotografija	<b>KULTURNI SEKTOR</b>
	Izvedbene umjetnosti	Kazalište, Ples, Cirkus, Festivali	
	Baština	Muzeji, Knjižnice, Arheološki lokaliteti, Arhivi	
<b>KRUG 1: KULTURNE INDUSTRIJE</b>	Film i video		
	TV i radio		
	Video igre		
	Glazba	Tržište snimljene glazbe, Živa izvedba glazbe, Prihodi udruga od naplate korištenja autorskih prava u glazbenom sektoru	
	Knjige i izdavaštvo	Izdavanje knjiga, Izdavanje novina i časopisa	
<b>KRUG 2: KREATIVNE INDUSTRIJE I AKTIVNOSTI</b>	Dizajn	Modni dizajn, Dizajn interijera, Grafički dizajn, Produkt dizajn	<b>KREATIVNI SEKTOR</b>
	Arhitektura		
	Oglašavanje		
<b>KRUG 3: POVEZANE INDUSTRIJE</b>	Proizvođači PC-a, MP3 playera, industrija mobilnih uređaja itd.		

Izvor: Prerađeno prema: KEA European affairs (2006)

### 3. ANALIZA EUROPSKOG SEKTORA KULTURNIH I KREATIVNIH INDUSTRIJA

Prema podacima Eurostata (2018) KKI sektor zapošljava 8,7 milijuna radnika, što čini 3,8% ukupne zaposlenosti te pridonosi ostvarenju 4,2% BDP-a Unije. Podaci Eurostata (2018) također ukazuju kako najveći udio zaposlenih u ovome sektoru ima Estonija (5,5%), dok je udio najmanji u Rumunjskoj (1,6%). Također, ovaj sektor je karakteriziran povoljnom obrazovnom strukturom, pri čemu 59% zaposlenih imaju visoko obrazovanje, 8% niže, a oko 33% zaposlenih je sa srednjom razinom obrazovanja.

Kao i u ostalim sektorima, djelatnosti u ovome se temelje na aktivnostima malih i srednjih poduzeća. Pritom, poduzeća KKI sektora čine 5% ukupnih europskih malih i srednjih poduzeća, ostvaruju više od 20 milijardi eura dodane vrijednosti te promet od 475 milijardi eura (otprilike 1,7% ukupnoga prometa na razini EU-a). Najveći broj poduzeća povezanih s aktivnostima KKI sektora imaju Švedska (7,6%) i Nizozemska (7,3%) (Eurostat, 2018). U strukturi KKI poduzeća dominiraju ona iz arhitekture, dizajna i fotografije, a koja čine 51% ukupnog broja poduzeća u ovom sektoru. Analiza dodane vrijednosti poduzeća KKI sektora upućuje na dominaciju (1) arhitekture, dizajna i fotografije; (2) kreiranja programa i emitiranja te aktivnosti novinskih agencija, te (3) izdavaštvo, kao ključnih djelatnosti, a kojima se ostvaruje 63% dodane vrijednosti sektora. Uz njih, značajne vrijednosti se ostvaruju tiskanjem i reprodukcijom snimljenih medija, itd., te kroz film, TV, glazbu i najam snimljenih materijala (Eurostat, 2018). Prema podacima Eurostata (2019), građani EU troše 2,8% svojih raspoloživih primanja na kulturu. Ipak, uzevši u obzir značajne razlike u gospodarskoj i socijalnoj situaciji u zemljama članicama EU-a, ove se vrijednosti uvelike razlikuju, pa tako stanovnici Švedske za ove namjene izdvajaju 5% svojih primanja, dok je navedena vrijednost u Bugarskoj na razini od samo 1,7%.

Prethodno analizirani podaci nesumnjivo ukazuju na značajan položaj i važnost KKI sektora za europsko gospodarstvo. Također, postoji čitav niz čimbenika kojima se može izražavati konkurentnost sektora. Neki od najznačajnijih su financiranje, ljudski resursi, tržišta i potrošači, suradnja i umrežavanje, inovacije i digitalizacija, internacionalizacija i međunarodna trgovina, te prava intelektualnog vlasništva.

Kao što je slučaj i kod većine ostalih malih i srednjih poduzeća, tako su poduzeća KKI sektora u najvećoj mjeri suočena sa problemom pristupa financiranju. KMU Forschung Austria (2016) kao glavne razloge takvog stanja ističe njihovu veličinu, nedostatak znanja potrebnih za poslovno planiranje i financijski menadžment, veći stupanj rizika s obzirom na potražnju proizvoda, značajan udio nematerijalne imovine i intelektualnog vlasništva te veliku ovisnost o javnom financiranju. Upravo specifičnost ovoga sektora najčešće rezultira i niskim stupnjem spremnosti banaka za odobravanjem zajmova. Prema podacima Europske komisije (2013), u strukturi financiranja poduzeća KKI sektora dominiraju vlastita ušteđevina te subvencije javnih vlasti, kao i donacije privatnih osoba i organizacija. S druge strane, najniži udio zauzimaju fondovi rizičnoga kapitala, sredstva prikupljena grupnim financiranjem (*crowdfunding*) te ostale vrste zajmova.

Vezano za područje ljudskih potencijala, KKI sektor je specifičan s obzirom da zapošljava radnike koji moraju imati određena i specifična poduzetnička i kreativna znanja. Od ukupnog broja europskih studenata, 12,2% je bilo uključeno u umjetnička i humanistička područja tj. stjecalo je znanja koja su potrebna ovom sektoru (Eurostat, 2018). Imajući na umu navedenu obrazovnu strukturu, zaposlenici u KKI sektoru se suočavaju s mnogim izazovima, a među kojima je potrebno istaknuti povezivanje umjetničkog i poduzetničkog znanja, nedostatak naprednih informacijsko-komunikacijskih vještina te nepoznavanje zakonodavstva u području prava intelektualnog vlasništva, a koje je usko povezano s djelatnostima u ovom području. Oko 2/3 ukupne prodaje poduzeća u KKI sektoru otpada na druga poduzeća, dok je ostatak usmjeren prema kućanstvima (KMU Forschung Austria, 2016). Zbog navedenih razloga te lokalne orijentacije djelatnosti, razjedinjenost europskoga tržišta (zbog kulturnih razlika, jezika itd.) te rastućih troškova internacionalizacije (posebno u području marketinga i distribucije), ova se poduzeća u većini slučajeva orijentiraju na lokalna tržišta, a što uvelike ograničava njihov globalni uspjeh i ostvarivanje međunarodne konkurentnosti.

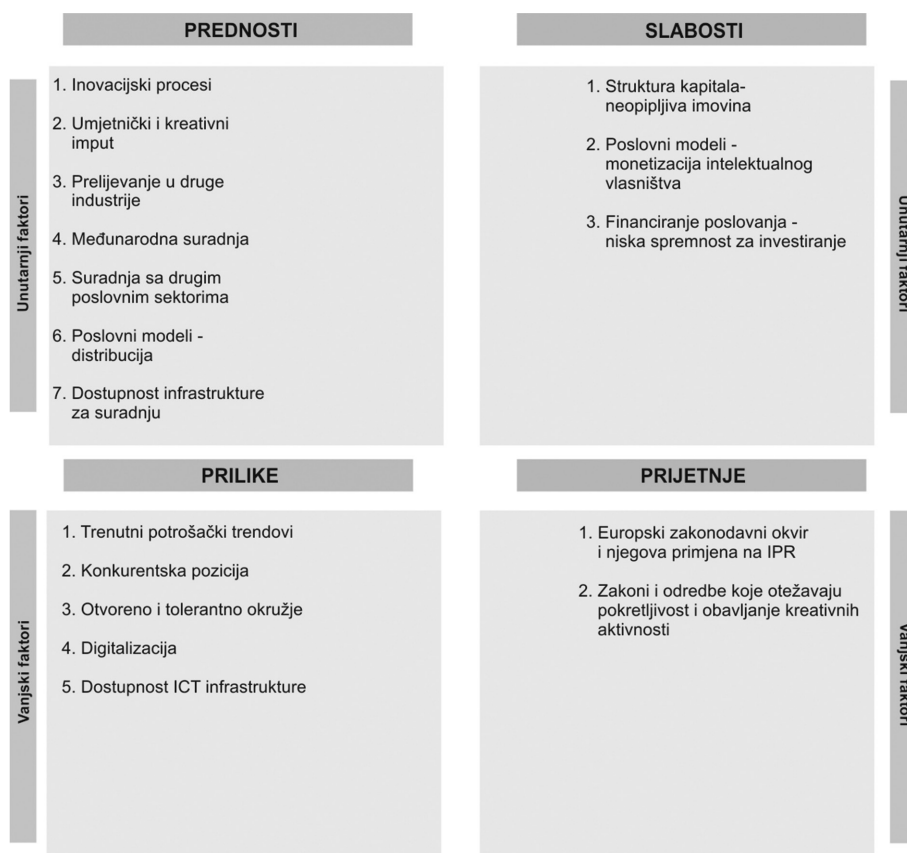
S obzirom na svoju strukturu, poduzeća KKI sektora karakterizira visoki stupanj specijalizacije. Takva situacija zahtijeva razvijanje suradnje i umrežavanje s ostalim poduzećima, u svrhu stvaranja novih i složenijih proizvoda, a što se može ostvariti npr. udruživanjem u klastere. Takva klasterizacija se provodi suradnjom sa srodnim poduzećima te visokoobrazovanim pojedincima, a što u konačnici rezultira nastankom inovativnih i kreativnih ekosustava, karakterističnih za velike aglomeracije (npr. London, Oslo, itd.). Uz stvaranje međusobne suradnje, razvoj i konkurentnost poduzeća KKI sektor potiče i Europska komisija kroz strategije pametne specijalizacije te Europski savez kreativnih industrija, kroz različite inicijative.

KKI sektor je uvelike povezan sa inovativnim rješenjima te je kao takav osjetljiv na znanstveno-istraživačke aktivnosti na području EU te na vrijednost javnih izdavanja za istraživanje i razvoj, obrazovanje te ostale suvremene izvore gospodarskoga rasta. Razvidne su značajne razlike između pojedinih zemalja članica u ovome segmentu (Eurostat, 2020), a što zasigurno ima i utjecaj na poduzeća u KKI sektoru. Naime, nova tehnološka rješenja stvaraju nove i složenije zahtjeve potrošača, a čemu se KKI sektor mora prilagoditi te zadovoljiti njihove potrebe. KKI

sektor predstavlja predvodnika u digitalizaciji, a koja ovome sektoru omogućuje snižavanje proizvodnih troškova, uključivanje u nove kanale distribucije i razvoj naprednih poslovnih modela.

Pravo intelektualnog vlasništva, njegova složenost te nedovoljna usklađenost na području EU-a, predstavljaju jedan od ključnih problema s kojima se poduzeća KKI sektora suočavaju. Prema Državnom zavodu za intelektualno vlasništvo Republike Hrvatske (2019) „*intelektualno vlasništvo se odnosi se na proizvode ljudskog uma koji u poslovnom smislu predstavljaju nematerijalnu imovinu. Iako neopipljivo, intelektualno vlasništvo ima sve karakteristike imovine, te se može kupiti, prodati, licencirati, zamijeniti, pokloniti ili naslijediti, kao i svako drugo vlasništvo*“. Za poduzeća KKI sektora posebnu važnost imaju autorska prava, koja prema Svjetskoj organizaciji za intelektualno vlasništvo (WIPO, 2019) podrazumijevaju „*prava koja kreatori imaju nad svojim književnim i umjetničkim djelima. Segmenti obuhvaćeni autorskim pravima kreću se od knjiga, glazbe, slika, skulptura i filmova, do računalnih programa, baza podataka, oglasa, karata i tehničkih crteža*“. Premda je rezultirala značajnim prednostima za poduzeća u ovome sektoru, digitalizacija je skrenula pažnju i na čitav niz izazova, a među kojima dominira piratstvo. Najnovija istraživanja ukazuju kako na razini EU-a, uvoz krivotvorenih proizvoda čini cca. 5% ukupnog uvoza tj. otprilike 85 milijardi eura, a što generira gubitak od oko 800.000 radnih mjesta te 14,3 milijarde eura poreznih prihoda. EU poduzima značajne aktivnosti u ovom području, a jedan od koraka je učinjen i 2015. godine akcijskim planom pod naslovom *Prema modernom, europskijem okviru autorskih prava*.

Uvažavajući prethodno analizirane karakteristike i ekonomsku vrijednost, KMU Forschung Austria je 2015. godine proveo SWOT analizu KKI sektora, a čiji su ključni rezultati prikazani na Slici 1.



Slika 1. SWOT analiza KKI sektora u EU

Izvor: KMU Forschung Austria, 2016

Pritom, kao najveće snage sektora identificirani su inovativnost, spremnost na suradnju, kreativni proizvodi te infrastruktura, dok su kao najveće slabosti istaknuti pristup financiranju te zakonodavni okvir u području intelektualnog vlasništva. Rezultati analize upućuju i na prilike KKI sektora, s posebnim naglaskom na potrošačke trendove, konkurentsku poziciju, digitalizaciju, dostupnost ICT-a te otvoreno i tolerantno okruženje. U konačnici, moguće je zaključiti kako će KKI sektor morati poduzeti značajne napore prema stalnoj prilagodbi tehnološkom napretku i očekivanjima potrošača, kao i poboljšanju regulatornog okvira za zaštitu intelektualnog vlasništva.

#### 4. MJERE I INSTRUMENTI POTPORE RAZVOJU SEKTORA KULTURNIH I KREATIVNIH INDUSTRISIJA U EU

Uvažavajući važnost KKI sektora za europsko gospodarstvo te njegove najznačajnije izazove, EU kreira široki spektar instrumenata podrške namijenjenih jačanju konkurentnosti i unaprjeđenju sektora. Značajan napredak afirmaciji KKI<sup>4</sup> sektora u EU je ostvaren reformama proizašlim iz Lisabonskoga ugovora i Ugovora o funkcioniranju EU-a, gdje članak 167 navodi kako je djelovanje EU usmjereno prema *“... poticanju suradnje između država članica te, prema potrebi, podupiranju i dopunjavanju njihovog djelovanja u čitavom nizu područja, a posebno poboljšavanju poznavanja i popularizacije kulture i povijesti europskih naroda, očuvanju i zaštiti kulturne baštine od europske važnosti, nekomercijalnoj kulturnoj razmjeni, umjetničkom i književnom stvaralaštvu, uključujući i stvaralaštvo u audiovizualnom sektoru“*. Općenito, prema Dragičević Šešić i Stojković (2011), kulturna politika podrazumijeva skup državnih intervencija, s namjerom usmjeravanja ovog područja u određenom smjeru, s posebnim naglaskom na njegov razvoj, zaštitu te ostvarenje međunarodne prepoznatljivosti.

Različite mogućnosti financiranja i potpore KKI sektoru su dostupne kroz europske strukturne i investicijske fondove, a posebno kroz Europski fond za regionalni razvoj (ERDF), program OBZOR 2020 te ostale oblike potpore na razini EU-a. U razdoblju 2014. – 2020. godine ključni program potpore kulturi predstavlja okvirni program Kreativna Europa, s ukupnim proračunom od 1,4 milijarde eura (Ministarstvo kulture Republike Hrvatske (1), 2020). Nadalje, valja izdvojiti Monitor kulturnih i kreativnih gradova, Europsku mrežu kreativnih čvorišta (The European Creative Hubs Network, 2020), pilot projekt Creative Tracks (Europska komisija, 2020), te projekt Kulturni i kreativni prostori i gradovi (Cultural and Creative spaces and Cities, 2020). Smisao navedenih instrumenata je analiza i nadzor implementacije kulturnih i kreativnih politika, umrežavanje i prenošenje pozitivnih iskustava te omogućavanje transformacije gradova i javnih prostora putem kreativnosti. Osim navedenih instrumenata, podrška KKI sektoru se ostvaruje i putem Europskog saveza kreativnih industrija, koji svojim aktivnostima želi omogućiti KKI sektoru da postane generator konkurentnosti, zapošljavanja i strukturnih promjena u EU (European Creative Industries Alliance, 2020). Europski program teritorijalne suradnje (URBACT) pruža podršku gradovima u suočavanju s ključnim problemima i izazovima putem umrežavanja i prijenosa dobrih praksi i specifičnih programa kao npr. Kreativni klasteri u slabije naseljenim urbanim područjima, Kreativna prelijevanja za inovaciju, Kreativni duhovi itd. (Europska unija, 2019). Aktivnosti KKI sektora su u značajnoj mjeri usmjerene prema lokalnim zajednicama, gdje je kao vodeću inicijativu potrebno izdvojiti projekt Europske prijestolnice kulture<sup>5</sup> (Ministarstvo kulture Republike Hrvatske (2), 2020).

<sup>4</sup> Na područje kulture se primjenjuje načelo supsidijarnosti, a koje prema Kandžiji i Cvečiću (2010) označava pružanje određene razine samostalnosti u odlučivanju nižim razinama vlasti.

<sup>5</sup> U 2020. godini, europske prijestolnice kulture su Rijeka (Hrvatska) i Galway (Irska), a jedna od tri prijestolnice u 2021. godini je Novi Sad (Srbija).

## 5. PREPORUKE ZA BUDUĆA ISTRAŽIVANJA

Buduća istraživanja tematike KKI sektora na razini EU-a bi se trebala usmjeriti na kvantificiranje učinaka ovoga sektora na najvažnije makroekonomske pokazatelje i ostvarenje konkurentnosti u zemljama članicama EU-a. Ovakvim pristupom će se stvoriti čvrsti temelji za definiranje znanstveno utemeljenih strateških pravaca nužnih za unaprjeđenje sektora te za jačanje njegovih sposobnosti prilikom suočavanja s globalnim izazovima.

## 6. ZAKLJUČAK

KKI sektor predstavlja jedan od najbrže rastućih sektora europskog gospodarstva sa značajnim udjelima u zaposlenosti, BDP-u i novostvorenoj vrijednosti. Također, sektor je uvelike orijentiran na mala i srednja poduzeća te kreativne i obrazovane pojedince. Navedena situacija rezultira značajnim izazovima, a među kojima se ističe pristup financiranju i kapitalu, neophodnome za nesmetano poslovanje. Također, uzimajući u obzir njihovu strukturu i ograničenost financijskih sredstava, poduzeća ovog sektora se suočavaju i sa poteškoćama vezanima za sudjelovanje na međunarodnom tržištu i ostalim oblicima internacionalizacije. Ipak, u kontekstu globalizacije i sve snažnijeg razvoja digitalnih tehnologija, KKI sektor se našao pred najznačajnijim izazovom povezanim sa zaštitom prava intelektualnog vlasništva kao i s neusklađenosti te problematike na razini EU-a, a što zbog postupaka krivotvorenja i ostalih protuzakonitih radnji, uvelike usporava daljnji napredak sektora. Uvažavajući sve prethodno navedene probleme i izazove, EU u suradnji sa svojim članicama usmjerava sve veću pažnju izazovima sektora te putem mjera, akcijskih planova, strategija te financijskih instrumenata poduzima aktivnosti osiguranja održivosti i napretka KKI djelatnosti. Iako problematika KKI sektora zauzima sve veću pažnju ekonomskih teoretičara, još uvijek je prisutan nedostatak relevantnih istraživanja i strukturiranih modela njegova budućega rasta te osnaživanja konkurentnosti. Iz svega navedenoga proizlazi znanstveni doprinos ovoga istraživanja.

## NAPOMENA

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# ZNAČAJ STICANJA INTERKULTURNE KOMPETENCIJE U OBRAZOVANJU, BIZNISU I PREDUZETNIŠTVU

## THE IMPORTANCE OF ACQUIRING INTERCULTURAL COMPETENCE IN EDUCATION, BUSINESS AND ENTREPRENEURSHIP

Gordana Mušura<sup>1</sup> 

DOI:

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**Apstrakt:** U radu se razmatra značaj interkulturene kompetencije u sferi obrazovanja, biznisa i preduzetništva budući da interkulturalna komunikacija postaje sve uobičajeniji vid interakcije među ljudima u savremenom globalizovanom svetu. Da bi se izbegli nesporazumi i konflikti u međusobnim kontaktima ljudi koji pripadaju različitim etničkim, kulturnim i religioznim miljeima, potrebno je da se oni postepeno senzibilizuju na takve nove interkulturene susrete i osposobe da rešavaju i nadvladaju problemske situacije koje bi se eventualno mogle pojaviti. Stoga se u radu posebno ističe važnost uvođenja interkulturenog pristupa u nastavi u što ranijem uzrastu učenika jer se time oni postepeno uvode u sferu interkulturenog poimanja stvarnosti i sveta oko sebe. Kroz interkultureno obrazovanje oni će razvijati svoju kulturnu osvešćenost i kritičku svest, što se smatra osnovnim postulatima sticanja interkulturene kompetencije. Ova kompetencija će im omogućiti da u svojoj budućnosti postanu interkultureni medijatori i posrednici u raznim vidovima međunarodne komunikacije, kao i u interkulturenom menadžmentu u biznisu i preduzetništvu. Nadalje, stečena interkulturena kompetencija će doprineti da oni kroz svoj budući profesionalni angažman postanu interkultureno efikasne osobe, sposobne da komuniciraju i uspešno posluju na globalnom ekonomskom planu.

**Ključne reči:** Interkulturalna komunikacija, interkultureni pristup u nastavi i obrazovanju, interkultureni medijator, interkultureno efikasna osoba.

**Abstract:** The importance of intercultural competence in the field of education, business and entrepreneurship is discussed in the paper as intercultural communication is becoming an increasingly common form of interaction among people in the modern globalized world. In order to avoid misunderstandings and conflicts in the mutual contacts of people belonging to different ethnic, cultural and religious backgrounds, it is necessary to gradually sensitize them to such new intercultural encounters and to be able to resolve and overcome problematic situations that might arise. Therefore, the paper emphasizes the importance of introducing an intercultural approach to teaching at the earliest possible age of students, as this gradually introduces them to the sphere of intercultural understanding of reality and the world around them. Through intercultural education, they will develop their cultural and critical awareness, which are considered the basic postulates of acquiring intercultural competence. This competence will enable them in their future to become intercultural mediators in various forms of international communication, as well as in intercultural management in business and entrepreneurship. Furthermore, the acquired intercultural competence will help them to become interculturally effective individuals through their future professional engagement, able to communicate and successfully operate in the global economic field.

**Keywords:** Intercultural Communication, Intercultural Approach in Teaching and Education, Intercultural Mediator, Interculturally Effective Person.

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## 1. UVOD

Savremeno globalizovano društvo nameće ljudima nove vidove komunikacije i interakcije zahtevajući od njih da se senzibilizuju na upotrebu interkulturalnog dijaloga i međusobno razumevanje. Ono takođe iziskuje od njih i sticanje interkulturalne kompetencije, kao posebne sposobnosti koja će im pomoći da lakše ostvare multikulturalne i plurilingvalne susrete, kao i da prevaziđu probleme koji se mogu pojaviti u kontaktu sa novom sredinom i osobama različite kulture, nacije, vere i različitog jezika. To se naročito odnosi na imigrante koji dolaze u neku, za njih novu zemlju, studente i uposlenike koji odlaze u inostranstvo na školovanje ili rad. Oni se kao došljaci susreću sa novim i drugačijim životom koji im često donosi i razne nepredviđene i stresne situacije koje bi trebalo prebroditi. Stoga je cilj ovog rada da ukaže na značaj sticanja interkulturalne kompetencije i potrebu uvođenja interkulturalnog obrazovanja još u ranom školskom uzrastu učenika kako bi se oni postepeno osposobljavali da spoznaju svet oko sebe, njegove različitosti i “drugosti”, te da kroz promenjenu perspektivu svojih pogleda i uverenja razvijaju svoju kritičku svest i kulturalnu osvešćenost, što su glavne odlike sticanja interkulturalne kompetencije. Ova kompetencija će im pomoći da tokom svog daljeg života i radnog angažmana uspostave uspešnu interkulturalnu komunikaciju u raznim domenima svojih delatnosti, a naročito na globalnom ekonomskom planu u sferi biznisa i preduzetništva, ispoljavajući osobine interkulturalno efikasne osobe čiji profil se predstavlja u ovom radu.

## 2. INTERKULTURNA KOMUNIKACIJA

Našem savremenom društvu su potrebni građani koji su u stanju da spoznaju multikulturalni svet današnjice u kome se susreću ljudi iz mnogih zemalja koji govore različitim jezicima i pripadaju drugačijim kulturalnim miljeima. Oni doživljavaju svet oko sebe na njima svojstven način, pa stoga kroz svoje međusobne kontakte sve više razvijaju svoju suptilniju sposobnost komunikacije koju nazivamo interkulturalnom komunikacijom. Takva komunikacija, prema Bajramu i saradnicima (Byram et al., 2002) utemeljena je na “poštovanju pojedinaca i jednakosti ljudskih prava kao demokratske osnove društvene interakcije” (str. 5).

## 3. INTERKULTURNA KOMPETENCIJA

Kroz interkulturalnu komunikaciju, po rečima Gudikunsta (Gudykunst, 2004, cit. u Lazzari, 2010) “razvija se i jedan poseban vid kompetencije koja se primenjuje u svakodnevnoj komunikaciji, medijaciji, u međunarodnim odnosima i interkulturalnom menadžmentu u preduzetništvu” (str. 1), a takođe je prisutna i primenljiva u obrazovanju na međunarodnom nivou. Ova kompetencija je poznata pod nazivom interkulturalna kompetencija (u daljem tekstu IK) i stiče se kroz interkulturalne kontakte koji se dešavaju u novim međukulturalnim situacijama u kojima se nalaze imigranti, studenti ili poslovni ljudi u međunarodnom okruženju. Sam termin IK potiče od Bajrama (Byram, 1997) koji je svojim istraživanjima i radom na stvaranju programa jezika pri Savetu Evrope stvorio konceptualni okvir IK. On se nadovezao na socijalnu, sociokulturalnu i stratešku kompetenciju koje je Van Ek (1986) izdvojio i formulisao koncept IK. U svom prvom radu na ovu temu Bajram i Zarat (Byram & Zarate, 1997, cit. u Larzen, 2005) definišu interkulturalno ponašanje kao “dovođenje u vezu dve kulture”, tj. sticanje sposobnosti da se “sagleda kako se različite kulture odnose jedna prema drugoj sa aspekta njihovih međusobnih sličnosti i razlika i da se postane posrednik, tj. medijator među njima” (str. 34). “Ovo posredovanje”, prema rečima istih autora (ibid.), podrazumeva “da smo u stanju da se pogledamo iz jedne “spoljašnje” perspektive tokom naših susreta i interakcija sa drugim ljudima”, kao i da izvršimo analizu i uskladimo i prilagodimo svoje sopstveno ponašanje i svoje vrednosti i uverenja koja vezujemo za ovakve situacije. To takođe znači da shvatimo

perspektive ostalih ljudi koje su drugačije od naših, kao i da preispitamo vlastite poglede. Iz ovoga proističe da se osobe koje steknu sposobnost sagledavanja iz ove obe perspektive sučeljavanjem njihovih komponenti, poput pomenutih vrednosti, verovanja i ponašanja, nazivaju interkulturalnim govornicima. Međutim, mnogi lingvisti su saglasni u tome da je teško dati sveobuhvatnu definiciju ovog pojma upravo zbog širokog kontekstualnog dijapazona u kome se ova kompetencija stiče. Tako (Moeller & Nugent, 2014) ističu da je “definisanje IK složen zadatak” i “da ne postoji precizna definicija IK u literaturi” (str. 2-3). Prema Diardorf (Deardorff, 2006) IK je “sposobnost da se komunicira efektivno i na odgovarajući način u interkulturalnim situacijama koje su bazirane na interkulturalnom znanju, veštinama i stavovima pojedinca” (str. 247). Definicija kojima se opisuje IK ima mnogo, a svima je zajedničko da uključuju znanje i sposobnost osobe da uspešno ostvari kontakte sa drugim ljudima u interkulturalnim susretima. Ta znanja i sposobnosti su važne alatke u društvu, pošto su ljudi gotovo svakodnevno uključeni u kulturnu razmenu koja se odvija u njihovoj međusobnoj interakciji (Eni S.p.A., 2011). Da bi bili uspešni u tome, moraju postepeno razvijati svoju osetljivost i osvešćenost prema kulturama koje su različite od njihove vlastite, što je jedna od komponenti sticanja IK. Po Čenu i Starosti (Chen & Starosta, 1996, 2004 cit. u Drandić, 2013) upravo “osoba koja je kulturno osetljiva ima sposobnost da prepozna, prihvati i poštuje kulturne razlike kroz pozitivne emocije”, pa se stoga može smatrati “kulturno kompetentnom” (str. 54).<sup>2</sup>

Iz termina IK proističe i pojam interkulturalna osetljivost, čiju konceptualizaciju je izvršio Čen (1997) i definisao je kao “sposobnost pojedinca da razvije pozitivnu emociju da bi razumeo i cenio kulturne razlike, te kao sposobnost koja pokreće odgovarajuće i efikasno ponašanje u interkulturalnoj komunikaciji” (str. 5). Isti autor (ibid.) smatra da se ovom definicijom predočava “interkulturalna osetljivost kao dinamički koncept jer interkulturalno osetljive osobe moraju imati želju da razumeju i prihvate razlike među kulturama i da proizvedu pozitivni ishod iz interkulturalnih interakcija”. Autor (ibid.) nadalje naglašava da takve osobe, “da bi razvile pozitivnu emociju” u pravcu prihvatanja kulturnih razlika i pospešivanja sticanja IK, “moraju posedovati sledeće komponente: samopoštovanje, samonadgledanje, široke poglede, empatiju, interakciju, uključenost u interakciju i nepresuđivanje, tj. nedonošenje prebrzih zaključaka ili sudova o nekoj kulturi ili pripadniku te kulture” (str. 7).

#### 4. ZNAČAJ INTERKULTURNE KOMPETENCIJE U OBRAZOVANJU

Interkulturalni pristup u nastavi i obrazovanju se nametnuo kao nezaobilazan i veoma značajan element u savremenoj školi. On je naročito prisutan u učionicama stranih jezika, a implementira se i kroz interdisciplinarnu nastavu mnogih drugih školskih predmeta, poput maternjeg jezika, istorije, geografije, građanskog vaspitanja, sociologije itd. Savremena društva su iznedrila novo viđenje funkcija vaspitno-obrazovnog sistema prema učenicima koji se obrazuju u globalizovanom svetu koga karakteriše život u multikulturalnim zajednicama. Stoga se “interkulturalizam pojavio kao politika koja podstiče međusobno prožimanje kultura” i “ugrađuje se u vaspitno-obrazovne politike evropskih i svetskih zemalja, pri čemu se interkulturalno obrazovanje posmatra kao proces razvoja, menjanja i oblikovanja čoveka u humano ljudsko biće” (Jagić, 2002 prema Bedeković, 2011, str. 140-141). Interkulturalni pristup, dakle, predstavlja nezaobilazni aspekt nastave koja prati društveni, ekonomski, politički i nadasve kulturni smisao nekog društva ili društvene zajednice, uz istovremeno sticanje znanja i veština. Otuda je neophodno da se ovakav pristup uvede u nastavno-obrazovne programe i planove još u nižim razredima osnovne škole kako bi deca od najranijeg školskog uzrasta bila pripremljena i osposobljena na percepciju i razvijanje svesti o postojanju različitosti, kao i na toleranciju prema različitosti, uz

<sup>2</sup> Ovaj segment rada preuzet je iz doktorske disertacije “Sticanje interkulturalne komunikativne kompetencije u nastavi italijanskog jezika kao stranog u osnovnoj školi” (Mušura, 2019).

istovremeno razvijanje kritičke svesti tokom poređenja svoje maternje kulture sa ostalim drugačijim kulturnim obrascima. Teza da interkulturno obrazovanje može uticati na bržu kulturnu senzibilizaciju, odnosno razvijanje kulturne osvešćenosti i time i sticanje IK kod učenika, se naslanja i na Bajramovu hipotezu (Byram et al., 2002) da učenik nije *tabula rasa*, već da poseduje određena prethodna znanja i stavove, koji uključuju i stereotipe i predrasude, na koje upravo interkulturno obrazovanje može uticati kako bi se povećala kulturna osvešćenost. Ovo je stav mnogih naučnih i prosvetnih radnika, kao i kulturnih poslenika, ali je potrebno još više razvijati svest u društvu, a naročito u relevantnim školskim institucijama u lokalnim zajednicama, o značaju i važnosti uvođenja interkulturnog obrazovanja.

#### 4.1. Uloga nastavnika

Uloga nastavnika je od izuzetnog značaja, pa je stoga neophodno da se i oni dodatno edukuju i senzibilizuju na “interkulturu na delu”, odnosno da kroz niz inoviranih didaktičkih aktivnosti i metoda doprinesu tome da se njihovi učenici što efikasnije uvedu u globalni svet i edukuju u pravcu eliminisanja kulturnog nerazumevanja, nesporazuma i kulturnog šoka u kontaktu sa pripadnicima drugih kultura tokom svog budućeg školovanja, rada i poslovnih kontakata u multikulturnom i plurilingvalnom društvu. Ovaj novi profil nastavnika bi stoga trebalo da neprestano razvija svest ne samo o lokalnim potrebama svojih učenika, već i o njihovim potrebama na globalnom nivou koje će imati kada završe svoje školovanje i počnu da ostvaruju raznovrsne interkulture susrete. Na taj način nastavnici prihvataju izazov savremenog nastavnog procesa koji teži interkulturnosti i obrazovanju za demokratsko društvo u internacionalnom kontekstu. Oni time takođe spoznaju svoju potrebu da budu interkulturno senzitivni kako bi postali moderatori interkulturnih odnosa, kao i posrednici između različitih stavova, pogleda i identiteta svojih učenika i ujedno sledili politiku Saveta Evrope koja propagira neophodnost celoživotnog učenja. Stoga se sticanje IK smatra važnim činiocem njihovog kontinuiranog profesionalnog razvoja i prilagođavanja evropskom sistemu obrazovanja i zahtevima modernog društva.

### 5. ZNAČAJ INTERKULTURNE KOMPETENCIJE U BIZNISU I PREDUZETNIŠTVU

Čen i Starosta (1996, cit. u Chen, 1997) su uočili “pet trendova koji uvode naš svet u globalno društvo u kome IK postaje neophodna sposobnost da bi građani 21-og veka mogli da prežive i žive produktivno i smisleno” (str. 3). To su:

- “razvoj tehnologije za komunikacije i transport kojom se povezuju ljudi iz različitih kulturnih miljea i svih delova sveta;
- globalizacija svetske privrede iziskuje uposlenike iz multinacionalnih kompanija koji komuniciraju sa onima iz drugih delova sveta da bi bili konkurentni na globalnom ekonomskom planu;
- široko rasprostranjene migracije stanovništva preko nacionalnih granica su strukturirale tkivo savremenog društva koje je postalo kulturno raznolikije od onog u prošlosti;
- razvoj multikulturalizma je uticao na svaki aspekt života u SAD gde je radna snaga uključivala ljude različite rase, kulture, pola, starosnog doba i jezika;
- de-naglašavanje nacionalne države je dovelo do toga da nacije formiraju regionalne saveze i da ljudi preispitaju etničke i rodne razlike unutar svoje nacije”.

Autor (ibid.) takođe napominje da “na društvo u SAD najveći uticaj među navedenim trendovima imaju migracije stanovništva i razvoj multikulturalizma”.

## 5.1. Profil interkulturalno efikasne osobe

Da bi ilustrovali značaj IK u sferi biznisa i preduzetništva, potrebno je detaljnije predstaviti koncept IK koji se primenjuje na međunarodne odnose i osobine koje bi trebalo da poseduje interkulturalno kompetentna osoba koja stupa u poslovne kontakte sa pripadnicima različitih kultura na internacionalnom nivou i u kulturno različitim sredinama od svoje sopstvene. Ovaj koncept je predmet istraživanja velikog broja naučnika, stoga ovde izdvajamo neka njihova zapažanja. Tako Salo-Lee (2006) navodi da je kanadski psiholog Danijel Kili (Daniel Kealey) tokom 90-tih godina prošlog veka intenzivno proučavao uposlenike koje su njihove bazične kompanije slale na rad u inostranstvo na određeno vreme i koristio termin efikasnost u inostranstvu (eng. *overseas effectiveness*). Shodno tome, autor (Kealey, 1990, cit. u Vasko et al., 1998) je definisao pojam interkulturalne efikasnosti (eng. *intercultural effectiveness*) kao “sposobnost da se živi i radi efikasno pri obavljanju zadataka u inostranstvu u interkulturalnom okruženju”. Prema Kiliju (ibid.), “efikasnost se sastoji od najmanje tri centralna područja: profesionalne ekspertize, interakcije i adaptacije”. Autor (ibid.) je produbio svoj koncept efikasnosti, ističući uticaj koji na njega imaju organizacioni i ambijentalni elementi pored ličnih osobina.

Kilijeve postavke su poslužile kasnijim istraživačima da formulišu Profil interkulturalno efikasne osobe (*Profile of the Interculturally Effective Person (IEP)*), u daljem tekstu Profil koji je nastao kao rezultat rada međunarodne grupe istraživača u kanadskom Centru za interkulturalno učenje pri Institutu za kanadsku inostranu službu 2000. godine. Prema ovom Profilu (Canadian Foreign Service Institute, 2000) interkulturalno efikasna osoba poseduje tri glavne osobine (str. 6):

- “sposobnost da komunicira sa ljudima iz druge kulture tako da zavređuje njihovo poštovanje i poverenje i time podstiče saradnju i produktivnost na radnom mestu, što će doprineti postizanju profesionalnih i radnih ciljeva;
- sposobnost da prilagodi svoje profesionalne veštine (tehničke i upravljačke) u skladu sa lokalnim uslovima i ograničenjima;
- sposobnost da se lično prilagođava da bi bila zadovoljna i da bi joj bilo lako u kulturi domaćina”.

Profil (ibid., str. 14 i dalje) nadalje pruža detaljniji opis bihevioralnih indikatora, odnosno veština i atributa koje bi ljudi trebalo da poseduju u svojoj radnoj praksi da bi se smatrali interkulturalno efektivnim osobama. To su sledeće osobine i veštine:

- „veštine prilagođavanja;
- stav sa izrazom skromnosti i poštovanja;
- shvatanje koncepta kulture;
- znanje o zemlji i kulturi domaćina;
- izgradnja odnosa;
- znanje o sebi;
- interkulturalna komunikacija;
- organizacione veštine;
- lična i profesionalna privrženost”.

Pošto su privrede i ekonomije mnogih zemalja poprimile svetske razmere od kada su njihove kompanije proširile svoje poslove na međunarodnom planu, sve više se oseća potreba za interkulturalno kompetentnim osobama koje poseduju navedene veštine i osobine, naročito u sferi marketinga, preduzetništva i poslovnih komunikacija. Stoga je i značaj IK u ovoj sferi sve veći.<sup>3</sup>

<sup>3</sup> Ovaj segment rada preuzet je iz doktorske disertacije “Sticanje interkulturalne komunikativne kompetencije

## 6. ZAKLJUČAK

U radu se ističe značaj IK u oblasti obrazovanja, biznisa i preduzetništva, a istovremeno se upućuje indirektna poruka školstvu i poslovnim strukturama društva da posvete više pažnje ovoj veoma važnoj sposobnosti interpersonalne komunikacije. Stoga se naglašava potreba da pored učenika i njihovi nastavnici, kao i zaposleni u multinacionalnim kompanijama i preduzećima koja sarađuju i posluju sa inostranim firmama, prođu interkulturalnu edukaciju i obuku koja će ih usmeriti u pravcu sticanja interkulturalne kompetencije kao jednog veoma važnog segmenta njihovog celoživotnog učenja i obrazovanja. Tek kada interkulturalnost u potpunosti zaživi i postane neizostavni deo obrazovnog procesa, učenici će moći da spremno uđu u globalizovani svet odraslih i da uspešno uspostavljaju kontakte sa drugim ljudima, bilo na ličnom ili profesionalnom planu, kao interkulturalni govornici i medijatori, a ne samo kao obični akteri u komunikaciji.

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# SPECIFIČNOSTI RAČUNOVODSTVENOG TRETMANA LIZINGA SREDNJIH, MALIH I MIKRO PRIVREDNIH DRUŠTAVA I PREDUZETNIKA

## SPECIFICS OF ACCOUNTING TREATMENT OF LEASING OF MEDIUM, SMALL AND MICRO COMPANIES AND ENTREPRENEURS

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DOI:

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**Apstrakt:** Na bankocentričnom finansijskom tržištu, gde na strani ponude dominiraju banke koje nisu zainteresovane za klijente bez kreditne istorije i sredstava obezbeđenja, lizing predstavlja značajan izvor finansiranja. Kao izvor finansiranja, lizing je bitan za sektor srednjih, malih i mikro privrednih društava i preduzetnika jer su procedure i uslovi apliciranja jednostavniji, a vreme dobijanja finansijskih sredstava kraće u odnosu na kreditno finansiranje. U radu su analizirane vrste lizinga, finansijski i operativni. Analiza je vršena na osnovu institucionalnih okvira koji regulišu ovu oblast, sa ciljem da se korisnicima ukaže na prednosti i nedostatke obe vrste lizinga. Na osnovu ukazanih karakteristika, korisnici lizinga biraće opciju koja je prihvatljiva prema njihovim kriterijumima. Ukoliko se poznaju obligaciono-pravni, poreski i računovodstveni aspekti finansijskog i operativnog lizinga može se uticati na optimizaciju poreskog opterećenja.

**Ključne reči:** finansiranje, računovodstveni tretman, finansijski lizing, operativni lizing.

**Abstract:** On the bank-based financial market, where the supply side is dominated by banks that are not interested in clients without credit history and collateral, leasing is a significant source of financing. As a source of financing, leasing is important for the sector of medium, small and micro companies and entrepreneurs because the procedures and conditions of application are simpler, and the time for obtaining financial resources is shorter compared to credit financing. This paper analyzes the types of leasing, financial and operational. The analysis was performed on the basis of institutional frameworks that regulate this area, with the aim of pointing out to users the advantages and disadvantages of both types of leasing. Based on the indicated characteristics, the lessees will choose an option that is acceptable according to their criteria. If the legal, tax and accounting aspects of financial and operating leasing are known, the optimization of the tax burden can be influenced.

**Keywords:** Financing, Accounting treatment, Financial leasing, Operating leasing.

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### 1. UVOD

U bankocentričnim finansijskim sistemima, dominantnu ulogu u finansiranju privredne aktivnosti imaju banke. Finansijsko tržište je slabo razvijeno, a za tek osnovana privredna društva bez kreditne istorije i sredstava za obezbeđenje, krediti su nedostupni.

Sektor srednjih, malih i mikro privrednih društava i preduzetnika u Srbiji učestvuje sa 99,8% u ukupnom broju preduzeća, 65% u zaposlenosti, sa preko 2/3 ukupnog prometa, preko 32% u stvaranju BDP-a, preko 50% izvoza i čini najprofitabilniji segment srpske privrede (Ernst&Yo-

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ung, 2017., str. 9). Ona imaju veliki potencijal za podsticanje privrednog rasta, inovativnosti, konkurentnosti i zapošljavanja i često nisu u stanju da ispunе uslove pod kojima se daju bankarski krediti. Često nemaju znanja iz oblasti ekonomije, menadžmenta, marketinga i finansija i nemaju dovoljno sredstava u pogledu obezbeđenja duga. Lizing za njih predstavlja značajan izvor finansiranja zbog pojednostavljenih procedura za dobijanje.

## 2. KARAKTERISTIKE LIZINGA

Lizing je sporazum po kome davalac lizinga prenosi na korisnika lizinga pravo korišćenja sredstava za dogovoreni vremenski period u zamenu za plaćanje ili niz plaćanja (Međunarodni standardi finansijskog izveštavanja, 2007., str. 1036). Kao jedan od značajnijih oblika sticanja poslovne imovine, neophodno je da u poslovnim knjigama bude tretiran u skladu sa zakonskim propisima koji ga regulišu, profesionalnom regulativom i usvojenim računovodstvenim politikama.

Lizing je važan izvor finansiranja, jer predstavlja prihvatljivo rešenje za nabavku osnovnih sredstava neophodnih za poslovanje. Da bi postala efikasnija i konkurentnija, privredna društva mogu da modernizuju svoju opremu i da za to plaćaju naknade koje neće uticati na njihovu tekuću likvidnost. U većini zemalja više od četvrtine svih nabavki poslovne opreme finansirano je na ovaj način.

Finansiranje opreme na lizing je u nekim aspektima povoljnije i za primaoca i za davaoca lizinga od kredita. Nabavkom opreme na lizing korisnik povećava svoju likvidnost zato što ne ulaže ukupan iznos sredstava odmah, već ih ulaže u druge aktivnosti. Rizik davaoca lizinga od neneplativosti dospelih potraživanja manji je nego kod davanja kredita. Iako atraktivna opcija finansiranja, lizing je skup metod finansiranja. Finansijske obaveze korisnika lizinga su od 50 % do 150 % skuplje u odnosu na iznos koji bi trebalo izdvojiti kroz klasičnu kupovinu.

Prednosti lizinga u odnosu na ostale vidove finansiranja su te što je procedura odobrenja kraća u odnosu na tradicionalne vidove finansiranja. Transakcioni troškovi su niži jer su davaoci lizinga najčešće u neposrednom kontaktu sa isporučiocima predmeta lizinga. Pošto je davalac lizinga formalno-pravni vlasnik predmeta lizinga tokom trajanja ugovora o lizingu, sredstva obezbeđenja najčešće se ne zahtevaju. Preduzetnici, novoosnovana, mikro, mala i srednja preduzeća ne raspolažu sredstvima za obezbeđenje kredita i uglavnom imaju slabiju kreditnu sposobnost. Prednost lizinga predstavlja i mogućnost da se preuzete obaveze po osnovu lizing ugovora mogu preneti na drugo lice. Sve to uzrokuje da je ovaj vid finansiranja za njih prihvatljiviji i bolji.

## 3. VRSTE LIZINGA

U zavisnosti od toga da li se finansira kupovina ili korišćenje predmeta lizinga, postoje dve vrste lizinga, finansijski i operativni. Kod finansijskog lizinga, primalac lizinga snosi, na određeno vreme, sve troškove i rizike u vezi sa predmetom lizinga, kao što su održavanje i osiguranje, i ima ovlašćenje držanja i korišćenja predmeta lizinga. Nakon isteka ugovora, korisnik finansijskog lizinga postaje vlasnik predmeta ugovora. Tokom trajanja ugovora vlasništvo nad predmetom lizinga ostaje na davaocu lizinga. Primalac lizinga koristi predmet lizinga tokom trajanja ugovora i snosi sve rizike i troškove koji proizilaze iz prava vlasništva, iako pravno nije vlasnik predmeta lizinga. Tek po isteku vremenskog perioda na koji je ugovor zaključen i po isplati ugovorene lizing naknade, pravo vlasništva sa davaoca lizinga se prenosi na primaoca lizinga.

Operativni lizing je sličan zakupu i sklapanjem ugovora ne prenose se svi rizici i koristi u vezi sa vlasništvom na primaoca lizinga. Nakon isteka ugovornog perioda primalac lizinga ima obavezu da predmet lizinga otkupi po unapred dogovorenoj ceni, vrati predmet zakupa ili produži period korišćenja. Kod operativnog lizinga koji je sličan ugovoru o zakupu, ekonomski vek predmeta zakupa je obično duži nego period trajanja ugovora, a servisiranje i održavanje predmeta ugovora pada na teret zakupodavca.

#### 4. REZULTATI ISTRAŽIVANJA

Obe vrste lizinga imaju specifičan obligaciono-pravni, poreski i računovodstveni aspekt. Pravni aspekt finansijskog lizinga uređen je Zakonom o Finansijskom lizingu („Službeni glasnik RS“, br. 55/03, 61/05, 33/11 I 99/11), a operativnog lizinga Zakonom o obligacionim odnosima, u kojem se odredbama čl. 567. do 599. uređuje ugovor o zakupu, koji u suštini obuhvata isto što i ugovor o operativnom lizingu, pa zbog toga ovu vrstu lizinga ne uređuje poseban Zakon o finansijskom lizingu. Poreski aspekt lizinga uređuje Zakon o porezu na dodatnu vrednost, i Zakon o porezima na imovinu. Računovodstveni aspekt lizinga uređuje Odeljak 20 – Lizing za subjekte koji primenjuju Međunarodne standarde finansijskog izveštavanja za mala i srednja preduzeća, a za subjekte koji primenjuju pune Međunarodne standarde finansijskog izveštavanja uređuje Međunarodni računovodstveni standard 17 – Lizing (Grupa autora, 2017., str. 238).

Od 2003. godine, kada je donet zakonski okvir za finansijski lizing, veliki broj privrednih subjekata koristi lizing za nabavku osnovnih sredstava.

Sredinom 2011. godine, izmenama Zakona o finansijskom lizingu omogućeno je da pored pokretnih stvari, predmet finansijskog lizinga mogu biti i nepokretnosti. Iako lizing nekretnina još uvek nije ozbiljnije zaživeo, očekuje se da će ovo imati pozitivne efekte na postojeće lizing kompanije, ali će ujedno uticati i na atraktivnost tržišta finansijskog lizinga i osnivanje novih kompanija (Erić, D., Beraha, I., Đurićin, S., Kecman, N., Jakšić, B., 2012., str 110).

U Srbiji posluje sedamnaest davalaca finansijskog lizinga, od kojih je trinaest iz bankarskog sektora. Ukupna bilansna aktiva sektora finansijskog lizinga iznosila je 102,9 milijardi dinara, i ceo sektor ima relativno nisko učešće problematičnih plasmana u ukupnom portfoliju. Prema Herfindal–Hiršmanovom indeksu, koji je na kraju 2018.godine iznosio 1.259,5 poena, tržište finansijskog lizinga spada u kategoriju tržišta sa umerenom koncentracijom (Narodna banka Srbije, 2018., str. 66).

**Tabela 1.** Struktura finansijskog sistema u Republici Srbiji (tržišni udeo u %)

	08	09	10	11	12	13	14	15	16	17	18
<b>Bankarski sektor</b>	89,3	90,8	91,8	92,4	92,7	92,4	92	91,5	91,1	90,7	90,3
<b>Davaoci finansijskog lizinga</b>	6,2	4,7	3,6	2,8	2,3	2,2	2	1,8	1,9	2,0	2,1
<b>Društva za osiguranje</b>	4,3	4,2	4,2	4,4	4,5	4,8	5,2	5,8	6,1	6,3	6,7
<b>Dobrovoljni penzioni fondovi</b>	0,2	0,3	0,4	0,4	0,5	0,6	0,8	0,9	0,9	1,0	0,9
<b>Ukupno</b>	100	100	100	100	100	100	100	100	100	100	100

*Izvor:* NBS, Godišnji izveštaji u periodu 2008-2018.

Sa aspekta predmeta lizinga, na kraju četvrtog tromesečja 2019. godine, najveće učešće u plasmanima po osnovu finansijskog lizinga i dalje se odnosi na finansiranje teretnih vozila, minibusu i autobusa (39,9%), kao i na finansiranje putničkih vozila (36,5%). Ostali predmeti lizinga, zastupljeni su sa oko 10,0% učešća. U sektorskoj strukturi plasmana po osnovu finansijskog

lizinga, u ovom tromesečju najznačajnije učešće imali su sektori saobraćaja, skladištenja, informisanja i komunikacija (27,7%). Značajnije učešće imao je sektor trgovine (15,9%), zatim sektor prerađivačke industrije, rudarstva i snabdevanja vodom, električnom energijom, gasom i parom (14,1%), kao i sektor građevinarstva (11,7%). Ostale delatnosti učestvovala su sa 22,0% (Narodna banka Srbije, 2019., str. 11).

U strukturi finansijskog sistema u posmatranom periodu, banke imaju učešće preko 90%, dok se učešće davaoca lizinga smanjuje.

Banke na domaćem tržištu nude skupe kredite koji su uglavnom sa zahtevima za obezbeđenje, indeksirani, ili su sa valutnim klauzulama. Privrednim društvima je na taj način nametnut devizni rizik jer visina obaveza po osnovu kamatnih stopa zavisiće od kretanja deviznog kursa. Banke osim kreditiranja ulaze i u druge finansijske poslove, osiguranje, lizing i na taj način same sebi prave kontrolisanu konkurenciju da bi sačuvale i povećale tržišno učešće i dodatno otežale ulazak novih učesnika na tržište (Pejović, B., 2018., str. 65).

Determinante koje treba razmotriti prilikom odabira za koju vrstu lizinga se opredeliti su sledeće: nabavna vrednost predmeta lizinga, ugovorna kamatna stopa (da li je sa valutnom klauzulom, da li je fiksna tokom trajanja ugovorne obaveze ili je vezana za neku referentnu kamatnu stopu), period trajanja ugovora o lizingu, odgovornosti i troškovi održavanja i osiguranja, koji su u većini slučajeva obavezni dok ugovorni odnos traje.

**Tabela 2.** Karakteristike finansijskog i operativnog lizinga

	<b>FINANSIJSKI LIZING</b>	<b>OPERATIVNI LIZING</b>
<b>Pravni i ekonomski status predmeta lizinga</b>	Pravno je u vlasništvu davaoca lizinga, a ekonomski ga koristi klijent koji ima ovlašćenje držanja i korišćenja predmeta lizinga sa svim rizicima i koristima povezanim sa pravom svojine;	I pravno i ekonomski je u vlasništvu davaoca lizinga;
<b>Tretman sa stanovišta Zakona o PDV-u</b>	Tretira se kao promet dobara; Unapred se plaća ukupan iznos PDV-a	Tretira se kao promet usluga; PDV se plaća uz ratu;
<b>Računovodstveni aspekti</b>	Korisnik lizinga predmet lizinga knjigovodstveno vodi kao svoje osnovno sredstvo u aktivi bilansa stanja, a u pasivi kao dugoročnu obavezu; Za glavnice lizing rate smanjuje se dugoročna obaveza po osnovu lizinga, a kamata se tretira kao finansijski rashod perioda	Predmet lizinga evidentira se u poslovnim knjigama davaoca lizinga; Korisnik lizinga celokupni iznos lizing rate tretira kao trošak zakupa u bilansu uspeha
<b>Obračun amortizacije</b>	Troškovi amortizacije se evidentiraju u bilansu uspeha korisnika lizinga	Troškovi amortizacije se evidentiraju u bilansu uspeha davaoca lizinga
<b>Rok zakupa</b>	Kraći od ekonomskog veka trajanja sredstva	Veći deo ekonomskog veka sredstva
<b>Učešće / Depozit</b>	Zakonsko ograničenje maksimalnog iznosa učešća je do 50%; Korisnik lizinga isplatom poslednje rate postaje vlasnik predmeta lizinga i učešće se ne vraća;	Depozit (ako je postojao) predstavlja vrednost predmeta zakupa u trenutku zatvaranja ugovora;
<b>Po isteku ugovora</b>	Predmet lizinga može se otkupiti ili se može produžiti ugovor	Predmet lizinga može se otkupiti, zameniti za nov ili vratiti bez ikakve obaveze;

**Izvor:** <https://www2.deloitte.com/rs/sr/pages/tax/articles/business-and-finance-analysis.html>  
i prema rezultatima istraživanja autora;

Računovodstveno evidentiranje transakcija finansijskog lizinga kod primaoca lizinga vrši se na sledeći način. Predmet lizinga priznaje se u visini nabavne vrednosti koju sačinjavaju fakturna

vrednost predmeta lizinga i zavisni troškovi nabavke, u koje se mogu svrstati troškovi odobrenja zahteva, pravne pomoći, konsultacija, transportni troškovi. Svi ostali troškovi, kao što su na primer kod nabavke automobila, troškovi registracije, troškovi obaveznog Kasko osiguranja, troškovi tekućeg održavanja, predstavljaju rashod perioda i ne ulaze u sastav nabavne vrednosti, kao ni u obaveze po osnovu lizinga. Predmet lizinga se evidentira kao oprema (na Računu 023 – Postrojenje i oprema) dugovno, po fer vrednosti sredstva koje je predmet lizinga, ili po sadašnjoj vrednosti minimalnih plaćanja lizinga, ako je ona manja, i potražno kao dugoročna obaveza (na Računu 416 – Obaveze po osnovu finansijskog lizinga) (Grupa autora, 2015., str. 15, str. 70.). Lizing naknada, koja nije sastavni deo nabavne vrednosti priznaje se kao finansijski rashod po dospeću u bilansu uspeha u periodima u kojima su nastali. Troškovi amortizacije, opreme uzete na lizing se evidentiraju u okviru bilansa uspeha i obračunavaju se adekvatno korisnom veku trajanja lizinga ili pripadnosti odgovarajućoj amortizacionoj grupi. Iznos amortizacije alocira se na svaki obračunski period na Račun 540 – Troškovi amortizacije, u skladu sa politikom amortizacije koju primenjuje, na osnovu Pravilnika o načinu razvrstavanja stalnih sredstava po grupama i načinu utvrđivanja amortizacije za poreske svrhe. Politika amortizacije za sredstva uzeta u finansijski lizing treba da se zasniva na politici amortizacije sredstava koja su u vlasništvu društva, u skladu sa politikom amortizacije koja je definisana internim aktom – Pravilnikom o računovodstvu i računovodstvenim politikama (Bodiroga, D., 2014., str 24). Obaveze po osnovu lizinga koje dospevaju u tekućoj godini reklasifikuju se sa Računa 416 – Obaveze po osnovu finansijskog lizinga na Račun 425 – Deo ostalih dugoročnih obaveza koje dospevaju do jedne godine. Visina obaveze uslovljena je najčešće valutnom klauzulom i referentnom kamatnom stopom.

Troškovi operativnog lizinga u računovodstvu se tretiraju kao operativni troškovi i smanjuju poslovni prihod, dok troškovi finansijskog lizinga su ekvivalentni zaduživanju i kupovini sredstava. U bilansu stanja, sadašnja vrednost troškova finansijskog lizinga prikazana je kao dug. Kao troškovi u bilansu uspeha prikazani su troškovi amortizacije predmeta lizinga kao i odnosni rashodi kamata.

Za privredna društva koja nisu u sistemu PDV, kod operativnog lizinga celokupni iznos fakture, koji se dobija svakog meseca, knjiži se na Račun 533 – Troškove zakupnina. U slučaju da je korisnik lizinga u sistemu PDV-a ima pravo korišćenja ulaznog PDV-a po osnovu zakupa. Obveznik nema pravo na odbitak poreza na dodatu vrednost po osnovu: nabavke, proizvodnje i uvoza putničkih automobila, motocikala, jahti, čamaca i vazduhoplova, objekata za smeštaj tih dobara, rezervnih delova, goriva i potrošnog materijala za njihove potrebe, kao i iznajmljivanja, održavanja, popravki i drugih usluga, koje su povezane sa korišćenjem ovih prevoznih sredstava, kao i dobara i usluga koji su povezani sa korišćenjem objekata za smeštaj tih dobara (“Sl. glasnik RS”, br. 84/2004, 86/2004 - ispr., 61/2005, 61/2007, 93/2012, 108/2013, 6/2014 - usklađeni din. izn., 68/2014 - dr. zakon, 142/2014, 5/2015 - usklađeni din. izn., 83/2015, 5/2016 - usklađeni din. izn., 108/2016, 7/2017 – usklađeni, član 29.).Ovo pravilo važi za obe vrste lizinga.

Kod finansijskog lizinga, iznos PDV-a koji je iskazan na ulaznoj fakturi može se koristiti kao ulazni PDV, ako je privredno društvo u sistemu PDV-a. Ako korisnik lizinga nije u sistemu PDV-a, celokupni iznos fakture knjižiće se na osnovna sredstva. U slučaju da davalac lizinga nije rezident, ulazni PDV će se priznati tek nakon postupka carinjenja i plaćanja u Republici Srbiji.

Operativni lizing jeste skuplja opcija iz perspektive primaoca lizinga, jer u toškovima zakupa je osim rate obračunata i kamata kao i svi rizici povezanim sa pravom svojine, ali veći troškovi zakupa utiču na optimizaciju poreskog opterećenja, po osnovu poreza na dobit.

## 5. ZAKLJUČAK

Lizing predstavlja značajan izvor finansiranja jer je lakše dostupan klijentima bez kreditne istorije i sredstava obezbeđenja. Postupak apliciranja je jednostavniji u odnosu na kreditno finansiranje, i vreme dobijanja odobrenja je kraće. Klasifikacija na finansijski ili operativni, zavisi od suštine transakcije, a ne od oblika ugovora. Finansijski lizing se evidentira u poslovnim knjigama primaoca lizinga kao osnovno sredstvo i dugoročna obaveza. Za iznos dospele lizing rate korisnik lizinga umanjuje dugoročne obaveze za iznos rate, a iznos kamate knjiži kao finansijske rashode. U bilansu uspeha prikazuje i troškove amortizacije predmeta lizinga. Kod operativnog lizinga, koji je sličan zakupu, predmet lizinga se vodi u poslovnim knjigama davaoca lizinga, a primalac lizinga troškove evidentira u bilansu uspeha kao troškove zakupa po osnovu svake fakture za tekući obračunski period i pruža mogućnosti da se predmet lizinga može otkupiti, zameniti za nov ili vratiti bez ikakve obaveze. Skuplji je iz perspektive primaoca lizinga, ali pruža veću mogućnost za optimizaciju poreskog opterećenja. Kod obe vrste lizinga postoji mogućnost za obračun ulaznog PDV-a, osim po osnovu nabavke, proizvodnje i uvoza putničkih automobila, motocikala, jahti, čamaca i vazduhoplova, objekata za smeštaj tih dobara, rezervnih delova, goriva i potrošnog materijala za njihove potrebe, kao i iznajmljivanja, održavanja, popravki i drugih usluga, koje su povezane sa korišćenjem ovih prevoznih sredstava, kao i dobara i usluga koji su povezani sa korišćenjem objekata za smeštaj tih dobara.

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# KLASTER KAO IZVOR KONKURENTSKE PREDNOSTI PODUZEĆA

## CLUSTER AS A SOURCE OF COMPETITIVE ADVANTAGE OF A COMPANY

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DOI:

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**Abstract:** *U radu su analizirane prednosti koje poduzeća mogu ostvariti stupanjem u klaster, uzevši u obzir povijesni kontekst klastera. Analizom je utvrđeno da se prednosti mogu klasificirati na tradicionalne i suvremene. Tradicionalne konkurentske prednosti karakteristične su za vrijeme kada su se klasteri primarno formulirali unutar određenih geografskih područja i kada su prednosti proizlazile iz neposrede blizine članica klastera. Suvremene prednosti proizlaze iz procesne povezanosti članica unutar klastera, te je prostorna dimenzija klastera izgubila na značaju iako su prostorno klasteri i dalje smješteni u unutar granica pojedinih regija. Procesna povezanost implicira postojanje opskrbnog lanca unutar klastera što znači da su uspostavljeni jedinstveni tokovi materijala, informacija i financija između članica klastera. Uspostavljanjem jedinstvenih tokova realiziraju se suvremene prednosti klastera u koje se ubrajaju ekonomija obujma, inovacije i fleksibilna specijalizacija.*

**Ključne riječi:** *Klasteri, Tradicionalne prednosti, Suvremene prednosti, Inovacija.*

**Abstract:** *The paper analyzes the advantages that companies can achieve by joining clusters, taking into account the historical context of the cluster. The analysis found that the benefits can be classified into traditional and contemporary. Traditional competitive advantages are characteristic at a time when clusters were primarily formulated within certain geographical areas and when advantages arose from the close proximity of cluster members. Modern advantages arise from the process connection of members within the cluster, and the spatial dimension of the cluster has lost its importance, although the spatial clusters are still located within the borders of individual regions. Process connectivity implies the existence of a supply chain within a cluster which means that unique flows of materials, information and finances are established between cluster members. By establishing unique flows, the modern advantages of clusters are realized, which include economies of scale, innovations and flexible specialization.*

**Keywords:** *Clusters, Traditional advantages, Modern advantages, Innovation.*

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### 1 UVOD

U radu je napravljena usporedba suvremenih prednosti koje poduzeća ostvaruju udruživanjem u klaster u odnosu na povijesni kontekst klastera kao složenih organizacijskih sustava. Identifikacija i klasifikacija konkurentske prednosti klastera na tradicionalne i suvremene važna je zbog identifikacije i diferencijacije pojedinih vrsta koristi koje se mogu ostvariti ovisno o tipu suradnje članica unutar klastera, ali i zbog produbljivanja spoznaja o važnosti klastera kao oblika složenog organizacijskog sustava. Mogućnost realizacije konkurentske prednosti prvenstveno ovisi o intenzitetu uspostavljene suradnje članica unutar klastera.

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Tradicionalne prednosti proizlazile su prvenstveno zbog neposredne geografske blizine članica klastera, dok suvremene prednosti proizlaze iz procesne integracije članica klastera. Drugim riječima, prednosti od integracije proizlaze iz međuorganizacijskog procesnog povezivanja koji za posljedicu ima formiranje jedinstvenih tokova materijala, informacija, financija i nadovezuju se na prednosti koje proizlaze iz teorija aglomeracije, a u njih se ubrajaju fleksibilna specijalizacija, inovacije i ekonomija obujma.

## 2. TRADICIONALNE PREDNOSTI KLASTERA

Pokretačke snage klastera kao geografsko koncentriranih poduzeća, nazivaju se aglomeracijskim prednostima i predstavljaju konvencionalne prednosti koje proizlaze iz teorije klasterizacije. Aglomeracijske prednosti mogu generirati nove i ojačati postojeće klastere prvenstveno zbog činjenice da su poduzeća fizički smještena u neposrednoj blizini što vodi do lakše komunikacije između partnera, koja se ne može kompenzirati niti aktivnim korištenjem komunikacijske tehnologije. Izuzimanjem informacijsko – komunikacijske tehnologije, čija se upotreba intenzivirala posljednja dva desetljeća, estrahiraju se suvremene prednosti klastera te se time jasnije mogu definirati i analizirati tradicionalne prednosti koje proizlaze iz teorija klasterizacije. Također, u današnjem vremenu značaj i pojam termina „neposredne blizine“ ne može se usporediti sa poslovanjem poduzeća u dvadesetom ili devetnaestom stoljeću kada je neposredna fizička blizina članica bila strateški ključna za neometano odvijanje poslovnih procesa. Danas, fizička blizina je predstavlja značajan faktor međuorganizacijskog povezivanja prvenstveno zbog intenzivnog razvoja informacijsko – komunikacijske tehnologije, liberalizacije trgovine te povećanja broja strateških saveza.

U tablici su navedene prednosti koje proizlaze iz tradicionalnih teorija aglomeracije.

**Tablica 1: Prednosti teorije aglomeracije**

<b>Prednosti neposredne geografske blizine</b>	<b>Marshallove eksternalije</b>
	<ol style="list-style-type: none"> <li>1. Lakši pristup radnoj snazi – zbog neposredne blizine članica ostvaruju se troškovne uštede zapošljavanja novih zaposlenika sa specijaliziranim znanjima.</li> <li>2. Lakši pristup dobavljačima primarnih, intermedijalnih i finalnih proizvoda i usluga.</li> <li>3. Lakše kruženje tacitnog znanja – zbog neposredne blizine članica lakše se prelijeva tacitno znanje koje se manifestira kroz veliki broj svakodnevnih formalnih i neformalnih interakcija.</li> </ol>
	<b>Porterove tržišne sile</b>
	<ol style="list-style-type: none"> <li>4. Potražnja – je generirana od strane domicilnog stanovništva, a rezultira pojačanim naporima poduzeća kako bi se ostvarila viša razina konkurentnosti.</li> <li>5. Rivalstvo – usmjerava članice poduzeća da se uspoređuju s najboljima.</li> <li>6. Nadopuna – proizlazi iz neposredne blizine poduzeća, a često i rezultira ostvarenjem dodatne prodaje.</li> </ol>
	<b>Transportne i transakcijske troškovne prednosti</b>
	<ol style="list-style-type: none"> <li>7. Troškovne uštede – proizlaze iz suradnje na istom geografskom području što vodi do minimiziranja transportnih i logističkih troškova.</li> <li>8. Povjerenje – proizlazi iz činjenice da članice surađuju na istom geografskom području te ostvaruju kontakte na dnevnoj bazi, što vodi do boljeg poznavanja organizacijske kulture i sustava vrijednosti partnera.</li> </ol>

Izvor: AUTOR

Krugman (1991) i Marshall (1920) predlažu takozvanu trijadu eksterne ekonomije. Prema autorima: „međuorganizacijske veze uključuju prelijevanje znanja te privilegirani pristup: specijaliziranoj radnoj snazi, sirovinama te intermedijalnim proizvodima i uslugama“. Prema Porteru (1998) „potražnja domicilnog stanovništva, rivalstvo između lokalnih poduzeća i dodatne mogućnosti koje se ostvaruju aglomeracijom mogu rezultirati ostvarenjem značajnih konkurentskih prednosti“.



Ukoliko se analiziraju konvencionalna istraživanja (Losch 1954, Weber 1920) jasno je da su članice kalstera u najvećoj mjeri profitirale od niskih transportnih troškova, što je i logično uzevši u obzir kontekst vremena i poslovne okoline. Neposredna blizina članica pozitivno utječe i na izgradnju međusobnog povjerenja između poduzeća iz razloga što neposredna blizina omogućava veći broj osobnih kontakata koji doprinose jačanju kvalitete partnerstva.

U nastavku su detaljnije opisane navedene prednosti kao i čimbenici koji utječu na njih.

## 2.1. Marshallove eksternalije

Smatra se kako je najčešće citirana prednost u teoriji aglomeracije olakšani pristup kvalificiranoj radnoj snazi (Marshall, 1920; Krugman, 1991). Prema teoriji aglomeracije, članice klastera imaju olakšani pristup radnoj snazi te mogu ostvarivati uštede zbog lakše regrutacije, socijalizacije i edukacije zaposlenika. Edukacija zaposlenika je važna prednost koja proizlazi iz klasterizacije, u početku se vezala uz prelijavanje specijaliziranog znanja između članica, dok u današnje vrijeme edukaciji pridonose obrazovne institucije unutar klastera koje osiguravaju da zaposlenici stječu adekvatna znanja kroz svoje nastavne planove, ali i da menadžeri nadograđuju svoja znanja kako bi se unaprijedila konkurentnost klastera u globalu.

Zbog geografske blizine moguće je bilo da se u jednom poduzeću generiraju viškovi radne snage, te da druga poduzeća u klasteru apsorbiraju radnike pošto obavljaju sličnu djelatnost stoga nije bila potrebna prekvalifikacija radnika. Ukoliko se poduzeće nađe u poslovnim poteškoćama, uzrokovanim lošim upravljanjem ili nesposobnošću da se prilagodi na nepovoljne ekonomske utjecaje, te otpusti svoje radnike, drugo poduzeće ih može zaposliti te si time povećati mogućnost stjecanja konkurentske prednosti. Zbog navedenih efekata poduzeća mogu reducirati troškove rada te povećati svoju produktivnost. Također, ukoliko se radi o školovanim i motiviranim kadrovima poduzeća mogu podići razinu svojih inovacijskih kapaciteta što također može rezultirati povećanju produktivnosti. Ipak, niti jedno istraživanje egzaktno ne dokazuje korelaciju između slobodnog pristupa radnoj snazi i rasta produktivnosti. U konačnici, zbog neposredne blizine članica, a uvjetima zagušenosti tržišta rada postoji i opravdana postoji bojazan menadžmenta poduzeća od prebjega radnika zbog boljih uvjeta koje nude konkurenti u klasteru.

„Poduzeća u klasterima isto mogu ostvariti benefite iz privilegiranog pristupa velikim lokalnim dobavljačima koji su u mogućnosti dostaviti visokospecijalizirane proizvode i intermedijalne poluproizvode i usluge (Marshall, 1920; Krugman, 1991)“. Olakotnu okolnost za poduzeća predstavlja činjenica da im je u neposrednoj blizini veliki broj dobavljača koji mogu osigurati kontinuitet poslovanja te na taj način pozitivno utječu na profitabilnost poduzeća. Poduzeća isto tako mogu i eksternalizirati aktivnosti koje nemaju visoki stupanj dodatne vrijednosti na ostale sudionike u klasteru, a u okviru svoga djelovanja zadržati izvođenje temeljne djelatnosti kako bi se što efikasnije zadovoljile tržišne potrebe. „Sudjelovanjem u radu klastera dobavljači mogu ponuditi robu po konkurentnijim cijenama od dobavljača izvan klastera (Porter, 1999)“.

Prema Marshallu (1920) i Krugmanu (1991) „prelijevanje znanja predstavlja još jedan faktor koji ide u prilog stjecanju konkurentske prednosti po teoriji aglomeracije“. Poduzeća imaju priliku apsorbirati specifična znanja koja su akumulirana od strane drugih poduzeća putem tržišnih i netržišnih kanala. „Kvalitetni izvori znanja mogu biti dobavljači, radnici ali i kupci (von Hippel, 1998)“. Nadalje, poduzeća važne informacije mogu prikupiti iz različitih izvora poput neformalnih razgovora, formalnih sastanaka, konferencija, zbornika, konferencija, industrijskih publikacija, itd.

U najvažniji oblik znanja ubraja se tacitno znanje, a to je znanje koje je neophodno kako bi poduzeća održala visoki stupanj inovativnosti i diferencijacije u odnosu na konkurenciju. Tacitno znanje ogleđa se u dnevnim operacijama, procesima i rutinama koje se provode na dnevnoj bazi između sudionika u klasteru. U cilju apsorpcije tacitnog znanja neophodno je da poduzeća zajedničkim snagama provode inovativne procese kao i da su involvirani u sve faze proizvodnog procesa. Upravo iz tog razloga od velikog su značaja osobni kontakti na dnevnoj bazi koji se lakše ostvaruju zbog fizičke blizine. Prema nekim autorima (Lawson i Lorenz, 1999) tacitno znanje stečeno od drugih sudionika može biti osnovna pokretačka snaga aglomeracije. Isti autori zaključuju da tacitno znanje pozitivno i snažno utječe na inovativne performanse poduzeća i na rast produktivnosti.

## 2.2. Porterove tržišne sile

Članice klastera imaju koristi od potražnje lokalnih kupaca koji mogu zahtijevati da proizvodi i usluge udovoljavaju traženim standardima glede montaže, performansi, kvalitete i korisničke podrške. Ona poduzeća koja su u stanju pozitivno odgovoriti na visoko postavljene zahtjeve od strane kupaca stječu konkurentsku prednost u odnosu na ona poduzeća koja to ne mogu. U adaptibilnim i fleksibilnim poduzećima izražena je intencija menadžmenta za udovoljavanjem želja kupaca što u konačnici rezultira povećanjem rastom profita. Kupci sa visokim zahtjevima pomažu poduzećima u podizanju razine motivacije zaposlenih koja je stavljena u funkciju povećanja rasta produktivnosti i inovacijskih performansi. U tome im pridonosi i neposredna blizina tržišta temeljem koje se mogu lakše prikupiti informacije o preferencijama i zahtjevima kupaca.

Michael Porter (1990) navodi kako „poduzeća u klasteru mogu profitirati od prisutnosti snažnog lokalnog rivalstva između poduzeća koja rezultira „zdravom konkurencijom“ što vodi do povećanja inovacijskog kapaciteta i produktivnosti“. Radnici na svim razinama sa specifičnim znanjima i vještinama međusobno se natječu kako bi se svojim znanjem pozitivno izdvojili, stekli priznanje od menadžera ili samo primili satisfakciju za izvršeni rad. Djelovanje velikog broja poduzeća na malom geografskom području vodi do veće transparentnosti poslovanja članica, što olakšava benchmarking i u konačnici može dovesti do prelijevanja znanja između sudionika u klasteru. U nekim je poduzećima koja nemaju izravnu konkurenciju unutar klastera naglašen pritisak ostvarenja konkurentске prednosti.

Prema Porteru (1998) „veliki broj poduzeća unutar klastera raspolaže radnom snagom slične kvalifikacije što vodi do čestih migracija radnika između poduzeća koje vode do transfera znanja u nova poduzeća i posljedično stimuliraju rast“. Ovakav rast izravno doprinosi vertikalnoj integraciji klastera ili horizontalnoj integraciji sektora. Za posljedicu, vertikalna integracija odražava se na porast razine specijalizacije radne snage što omogućava poduzećima lakši pristup novim tržišnim nišama, dok se horizontalna integracija odnosi na implementaciju novih tehnologija i angažiranje zaposlenika sa specijaliziranim znanjima i vještinama u integriranim industrijama.

„Još jedna snaga iz teorija aglomeracije proizlazi iz činjenice da se lokalni dobavljači međusobno nadopunjuju (Porter, 1990)“. Poduzeća se u klasterima mogu pasivno i aktivno nadopunjavati. Na primjer, kupci mogu u jednom danu obići sve potencijalne partnere te donijeti odluku s kime žele inicirati poslovni odnos. Poslovni uspjeh samo jednog dobavljača može pozitivno utjecati na druge te tako neizravno doprinjeti njihovom rastu. Ukoliko je suradnja između dobavljača uspješna to znači da postoji pozitivna poslovna klima koja se očituje u zajedničkom istraživanju i razvoju, proizvodnji, regrutiranju, treningu, prodaji i provođenju postprodajnih aktivnosti. Lokalna poduzeća mogu lakše otkriti prijetnje i prilike u poznatom okruženju, za

razliku od poslovanja na udaljenim tržištima. Niži kooperacijski troškovi kao i rast prodaje pozitivno utječu na rast profitabilnosti poduzeća.

### 2.3. Transportne i transakcijske troškovne uštede

„Transportne uštede rezultat su neposredne geografske blizine (Losch, 1954 i Weber 1920)“. Poslovanje unutar istog geografskog područja djeluje na ekonomičnost poslovanja jer dobavljači i kupci reduciraju svoje troškove poslujući unutar zajedničkog geografskog područja. Ovoj prednosti se puno više davalo na značaju u 20-om stoljeću nego što je to danas jer trenutno veliki broj poduzeća svoje poslovanje osuvremenjuje različitim poslovnim rješenjima kojima se ostvaruju koristi u logističkom segmentu poslovanja. Kao jedno od suvremenijih rješenja navodi se just-in-time sustav koji poboljšava nabavu sirovine i robe, te reducira administraciju povezanu s vremenom obrade dokumenata, dostavom i otpremom robe te povećava brzinu i točnost isporuke kako bi se eliminirali zastoji u proizvodnom procesu. U današnje vrijeme sve veći broj poduzeća raspolaže vlastitim voznim parkom putem kojeg se nastoji sniziti i eliminirati rizik od neisporučivanja robe. Također, logistička poduzeća na svakodnevnoj bazi nude inovativne usluge, što u nekim slučajevima može dovesti i do kompletnog preuzimanja i vođenja partnerovog materijalnog toka, pa tako logističko poduzeće može samostalno voditi skladište svojega kupca.

Naposljetku, mogu se ostvariti i uštede u transakcijama zbog činjenice da se povjerenje lakše stječe među poduzećima koja su bliže geografski locirana. Kako poduzeća međusobno izgradila sustav koji se temelji na međusobnom povjerenju potrebno je da se međusobno dijele informacije, ciljevi, misije i vizije te da se uspostavi uhodani sustav komunikacije koji će pridonijeti održavanju ugovorenih vrijednosti.

## 3. SUVREMENE PREDNOSTI KLASTERA

Uspostavom procesne vertikalne integracije stvaraju se preduvjeti za ostvarenje suvremenih prednosti klastera. U suvremene prednosti se ubrajaju fleksibilna specijalizacija, povećanje inovacijskih kapaciteta te ekonomija obujma. Nabrojane prednosti se ne realiziraju zbog poslovanja u okviru fizičkih granica klastera već zbog uspostave procesne integracije između članica klastera. Primarni cilj procesnog povezivanja je uspostava jedinstvenih tokova materijala, informacija i financija između članova klastera.

### 3.1. Fleksibilna specijalizacija

Jedan od najvažnijih izvora konkurentske prednosti klastera predstavlja fleksibilna specijalizacija. Best (1990) smatra kako je „fleksibilna specijalizacija primjerena strategija za mala i srednja poduzeća u klasterima koja im pomaže u nastojanjima da ostvare plasman robe na inozemno tržište“, dok je prema van Dijku (1995) „fleksibilna specijalizacija jedan od najvažnijih čimbenika uspješnosti industrijskih distrikta“. Premda je značajan broj istraživača dokazao pozitivan utjecaj klasterizacije na fleksibilnu specijalizaciju, ipak nije definirana jedinstvena metodologija kojom bi mjerio njezin utjecaj na konkurentnost. Kao jedan od glavnih razloga navodi se činjenica da se istraživači nisu usuglasili oko definicije termina fleksibilna specijalizacija.

Capecchi (1990) definira fleksibilnu specijalizaciju kao: „sustav kojeg obilježava: maloserijska specijalizirana proizvodnja, kooperacija između radnika na različitim razinama unutar tvornice, visoka mobilnost radnika i bliska suradnja između poduzeća i kupaca“. Van Dijk (1995)

se sa svojim istraživanjem nadovezuje te zaključuje kako „fleksibilna specijalizacija doprinosi inovacijama, jačanju interakcija između poduzeća, umrežavanju poduzeća i kolektivnoj efikasnosti“. Nadalje, Lawson (1997) apostrofira značaj koji zauzima fleksibilan sustav proizvodnje koji je u funkciji zadovoljenja zahtjeva kupaca. Fleksibilan sustav podrazumijeva visoku tehnologiju, integrirane procese i spremnost zaposlenika da udovolje rastućim potrebama kupaca glede kvalitete, cijene i vremena isporuke proizvoda i usluga.

U velikom broju znanstvenih i stručnih radova dokazano je da su mala i srednja poduzeća fleksibilnija na promjene u okruženju od velikih poduzeća, prvenstveno zbog svoje veličine koja im omogućava da se lakše nose sa promjenama iz okruženja. Manji broj zaposlenika i organizacijskih razina rezultira bržim odlučivanjem i sprovođenjem odluka, efikasnijom kontrolom, bržim prijenosom informacija, lakšom implementacijom inovacija, itd. Sve nabrojano odnosi se na efikasnost koju Gupta i Goyal (1989) definiraju kao „sposobnost poduzeća da se brzo adaptira na promjene koje proizlaze iz nesigurnosti okoline“. U današnjem dinamičnom i nestabilnom okruženju fleksibilnost je postala ključni uvjet opstanka poduzeća.

Fleksibilnost može imati više dimenzija i sfera utjecaja tako se autori razmimoilaze u svojim razmišljanjima. Stigler (1939) zaključuje „kako fleksibilnost s aspekta doprinosa konkurentskoj prednosti najviše doprinosi kroz razvoj finalnog proizvoda“. Prema Figenbaum-u i Karnai-u (1991) „mala i srednja poduzeća spremna su povećati ili sniziti količine outputa kako bi se povećao profit“. Naposlijetku prema MacMillanu et al. (1982) i Tellisu (1989): „fleksibilnost je u proizvodnji jednako važna kao i cijena, pošto je trošak prilagodbe proizvoda zahtjevima tržišta niži od onih u velikim poduzećima“.

Fleksibilnost se očituje u i mnogim sferama poslovanja poduzeća u klasteru, a za potrebe ovoga istraživanja analizirati će se utjecaj fleksibilnosti na proizvodne procese i tehnologiju.

Fleksibilnost proizvodnih procesa posljedica je umrežavanja poslovnih procesa unutar klastera. „Mala poduzeća mogu unaprijediti efikasnost i fleksibilnost razvijajući poslovne procese kojima se ostvaruju koristi u vidu kolektivnog učenja i dijeljenja zajedničkih resursa (Piore i Sabel, 1984)“. Međusobno procesno povezivanje za posljedicu ima dijeljenje zajedničkih resursa koje je u funkciji uspostave jedinstvenog proizvodnog procesa kako bi se moguće greške eliminirale te se skratio proizvodni ciklus što doprinosi efikasnosti i efektivnosti cjelokupnog sustava. Fleksibilnost klastera kao složenog poslovnog sustava očituje se u sposobnosti adaptacije na dinamične promjene iz okruženja, što danas predstavlja veliki izazov menadžerima klastera, pošto klaster tvore članice iz različitih faza proizvodnje koje nemaju uvijek istu poslovnu filozofiju niti viziju zajedničkog poslovanja.

Tehnološka fleksibilnost podrazumijeva dinamične i učinkovite promjene koje se odražavaju na sustav proizvodnje. U najvećem broju slučajeva mala poduzeća imaju fiksne jedinične troškove proizvodnje te je krivulja troškova manje elastična na promjene u proizvodnim karakteristikama. U fleksibilnoj proizvodnji često se primjenjuje just – in – time sustav upravljanja zalihama koji rezultira snižavanjem troškova zaliha. „Primjena fleksibilne proizvodnje obično vodi prema profitabilnosti poduzeća (Carlsson, 1989)“. Tehnologija koju upotrebljava poduzeće danas je jedan od ključnih faktora koji ima utjecaj na kvalitetu usluga i proizvoda. Članice klastera koje posjeduju suvremenu tehnologiju povećavaju si mogućnost realizacije tržišnog uspjeha za razliku od onih poduzeća koja odgađaju osuvremenjivanje sustava proizvodnje. Tehnologija je izuzetno bitna u smislu brzog prilagođavanja preferencijama kupaca i skraćivanja životnog vijeka proizvoda

koji je u funkciji brze zamjene dotrajalog proizvoda s novim, što predstavlja važnu konkurentsku prednost u današnjem okruženju. Mogućnost korištenja modernih tehnoloških rješenja važna je i zbog onemogućavanja imitacije njihovih poslovnih procesa te u konačnici usluga i proizvoda.

Tehnologija koju poduzeća koriste u klasterima trebala bi biti komplementarna kako bi se neometano mogli odvijati poslovni procesi. U znanjem intenzivnim klasterima karakteristično je da poduzeća međusobno razmjenjuju dostupnu tehnologiju. Ukoliko se za proizvodnju diferenciranog proizvoda ili usluge koristi specifična tehnologija, od velike je važnosti da su i ostali članovi klastera upoznati sa koristima od primjene iste jer to doprinosi usavršavanju postojeće tehnologije ili pak uvođenju nove. Na ovaj način dolazi se do međuorganizacijskog prelijevanja znanja koje je važno za jačanje inovacijskog kapaciteta.

Uz sve navedene prednosti fleksibilna specijalizacija ima i neke nedostatke. Prvo, ukoliko menadžment nije u dovoljnoj mjeri educirao svoje zaposlenike da koriste sve funkcionalnosti tehnologije realno je očekivati pad produktivnosti i/ili efikasnosti. Navedena situacija karakteristična je za poduzeća koja obnašaju djelatnosti u primarnoj industriji, a radna snaga pruža otpor edukaciji i usavršavanju. Drugo, moguće je da menadžment napravi krivu procjenu sposobnosti svoje radne snage te će takva investicija u konačnici predstavljati oportunitetni trošak za poduzeće. Zadatak menadžmenta je uskladiti tehnološke potencijale s kompetencijama radnika jer se na taj način stvara poticajno okruženje za nastanak inovacija.

### 3.2. Inovacije

„Inovacije su važne za jačanje konkurentnosti poslovnih sustava pojedinačnih poduzeća (Acs i Audretsch, 1990)“. Inovacija se definira kao uvođenje novih sustava, mjerila, proizvoda ili procesa. „Preljevanje znanja između sudionika u klasteru doprinosi povećanju inovacija i produktivnosti (Griliches, 1991)“. „Postoje različite interpretacije pojma „inovacija“ i „inovacijskog procesa“, a sve su povezane s učecim mehanizmima, čije forme su osnova za poboljšanje inovacijskih sposobnosti koje doprinose učincima klasterizacije (Albu, 1997)“.

Interakcija i kooperacija poduzeća unutar klastera u provođenju zajedničkih resursa su prema Den Hertogu (1999) glavni faktori koji doprinose izgradnji inovacijske klime koja je neophodna za stvaranje inovacija. Autori zaključuju kako je od ključne važnosti za rast i razvoj klastera kontinuirano provoditi inovacijske procese, a za njihovu inicijaciju od presudne su važnosti strateški savezi, strateško planiranje, prelijevanje znanja između poduzeća te uspostava istraživačkih instituta, sveučilišta i drugih obrazovnih institucija. Proces klasterizacije u kojem sudjeluju i potporne institucije stvaraju preduvjete za formiranje interne okoline koja je pogodna za apsorpciju inovacijskih kapaciteta iz različitih izvora. Inovacijska sposobnost je glavni faktor koji doprinosi konkurentnosti poduzeća u današnjoj ekonomiji baziranoj na znanju. Upravo iz tog razloga razumljiv je značaj koji zauzima inovacijski kapacitet kao važan preduvjet prilikom formiranja klastera.

U većini slučajeva mala i srednja poduzeća ne ulažu dovoljno u trening svojeg osoblja pošto postoji bojazan menadžmenta da neće povratiti uložena sredstva. Kako bi se izbjegao navedeni slučaj poduzećima se sugerira aktivno sudjelovanje u radu klastera jer osim prelijevanja znanja na operativnoj razini, steći će se i uvid u rad na strateškoj razini koja obuhvaća menadžersko upravljanje.

Intenziviranjem inovacija i nadogradnjom internih procesa poduzeća nadograđuju postojeće znanje i doprinose stvaranju dodatne vrijednosti koja je najvažniji činitelj konkurentne pred-

nosti i jamac dugoročnog opstanka poduzeća. Poduzeća unutar klastera mogu surađivati u vertikalnom i horizontalnom smjeru.

Vertikalni smjer podrazumijeva suradnju na različitim organizacijskim razinama unutar opskrbnoga lanca. U najvećem broju proizvodnih industrija klastičan opskrbni lanac obuhvaća veliki broj subjekata od kojih svaki svojim djelovanjem doprinosi dodatnoj vrijednosti finalnog proizvoda. Uspješni primjeri vertikalnih opskrbnih lanaca uključuju široku bazu poduzeća u koje se mogu ubrojiti znanstvena zajednica i strukovna udruženja, konzultantska poduzeća, marketiške agencije, dobavljači: primarne sirovine, rezervnih dijelova, potrošnog materijala, gotovih proizvoda, itd. Najuspješniji primjeri (Manzano drveni klaster stolica u Italiji, klaster namještaja u Austriji Möbel & Holzbau-Cluster) pokazuju da uska specijalizacija svakog od nabrojanih subjekata vodi do finalnog proizvoda sa najvišim stupnjem dodatne vrijednosti. Horizontalna suradnja manifestira se primarno prelijevanjem znanja između poduzeća koji posluju na istoj razini pa na primjer dobavljači s iste razine mogu svakodnevno operativno surađivati prilikom izrade jedne komponente i na taj način razmjenjuje se iskustvo i znanje. Također korištenje zajedničke infrastrukture, istih konzultanata, usluživanja istih kupaca doprinosi navedenom procesu.

„Uspostava vertikalne suradnje zbog povećanja inovacijskog kapaciteta vodi do troškovne efikasnosti klastera bez potrebe za kontinuiranim ulaganjem u najnovija tehnološka rješenja (Samaržija, 2014)“. Kontinuirana akumulacija znanja, vještina i specifičnog znanja u određenoj djelatnosti snažno i pozitivno korelira sa inovativnosti klastera ukoliko postoji visoka razina svjesnosti članica o prednostima koje se mogu ostvariti međusobnom suradnjom. „Prisustvo velikog broja dobavljača, različitih informacija i podataka, specijaliziranih usluga, institucija i kooperativnih akcija između dionika saveza olakšava jednostavan i povoljan pristup specijaliziranim inputima koji su potrebni za osuvremenjivanje tehnologija rada te kreaciju novih znanja (Caniels i Romijn, 2002)“. Olakšan pristup resursima i sirovinama iz neposredne blizine u kombinaciji sa potporom istraživanja i razvoja koje pružaju obrazovne institucije i istraživački instituti, te aktivna suradnja specijaliziranih članica vodi kontinuiranom razvoju inovacija.

Prema Simmie-u (2004) u glavne pokretače inovacija u klasterima ubrajaju se poduzeća koja - konkuriraju međusobno na tržištu i to iz nekoliko razloga. „Prvo, poduzeća u klasteru brzo detektiraju potrebe novih kupaca; drugo, u klasteru se koncentriraju znanje i informacije; treće, omogućava se asimilacija novih tehnologija; četvrto, moguće je dobiti lakši uvid u nove prakse menadžmenta; peto, olakšana je suradnja s potpornim institucijama i šesto, ekonomija temeljena na znanju je najefikasnija kada su resursi znanja lokalizirani“.

Na jačanje inovacijskog potencijala snažno utječe kreditna sposobnost poduzeća koja se očituje u mogućnosti da poduzeće kontinuirano ulaže u istraživanje i razvoj. U radu klastera uglavnom sudjeluju manja obiteljska poduzeća ili obrtničke radnje kojima je izvorima financiranja ograničen. Ipak međusobnim udruživanjem stvaraju se pozitivne okolnosti koje olakšavaju pristup financijskom kapitalu i samim time otvara se i mogućnost ulaganja u istraživanje i razvoj. U nekim slučajevima bankarske institucije uključuju se u rad klastera te time nude povoljnije kreditne aranžmane članicama klastera. U konačnici poduzeća partneri mogu između sebe podijeliti troškove ulaganja u istraživanje i razvoj te time disperzirati rizik na nekoliko članica.

Intenzivna suradnja članica unutar ograničenog područja na dnevnoj bazi rezultira kreacijom različitih imitacija postojećih tehničko – tehnoloških rješenja, što također doprinosi prelijevanju znanja i jačanju inovacijskih kapaciteta poduzeća. Proizvodnja zamjenskih dijelova ili proi-

zvoda sličnih performansi podrazumijeva da su poduzeća usvojila znanje i tehnologiju da se uspoređuju sa najboljima što znači da uvode kontinuirane modifikacije u svoj proces dodavanja vrijednosti finalnog proizvoda.

### 3.3. Ekonomija obujma

Klastere u većini slučajeva čine mala i srednja poduzeća (Marshallov tip klastera) iako postoje i slučajevi kad su mala i srednja poduzeća okupljena oko multinacionalnih korporacija (tip klastera „Satelit“). Važnost malih i srednjih poduzeća u ekonomskom i socijalnom razvoju regija i cjelokupnih država već je dokazana iako su sve izraženiji primjeri gdje multinacionalne korporacije zbog svoje ekonomske snage i pregovaračke moći negativno djeluju na razvoj i tržišni opstanak malih i srednjih poduzeća.

Upravo s ciljem prevladavanja postojećeg problema mala i srednja poduzeća se zajedno udružuju u klastere kako bi stekli neke koristi od zajedničkog nastupa na tržištu poput lakšeg pristupa informacijama, jačanja pregovaračke moći prema dobavljačima i kupcima, prevladavanja ulaznih barijera na nekim tržištima ili pristupa povoljnijem kapitalu. „Poduzeća surađujući zajedno međusobno si pomažu u prevladavanju zajedničkih prijetnji i slabosti (Ceglie i Dini, 1999)“. Aktivna participacija u redu klastera poduzećima pomaže u identificiranju zajedničkih problema čije rješavanje je preduvjet donošenja razvojnih poslovnih odluka.

Participacijom u radu klastera poduzećima se otvara mogućnost plasmana svojih proizvoda i usluga na nova tržišta ukoliko se klaster aplicira na neki natječaj ili jednostavno poraste potražnja za proizvodima klastera. Mala poduzeća u najvećem broju slučajeva nisu u mogućnosti realizirati velike narudžbe, stoga nastup na tržištu kroz klaster pozitivno se reflektira na njihov rad glede povećanja prodaje svojih proizvoda. Povećanjem obima proizvodnje dolazi do ekonomije razmjera kojoj u prilog ide i dijeljenje radne snage, opreme, alata i sustava proizvodnje sa ostalim članicama. Ekonomiju obujma moguće je i ostvariti specijalizacijom proizvodnog procesa, upotrebom suvremenih tehnoloških rješenja koja utječu na snižavanje troškova proizvodnje intermedijalnih dobara što u konačnici doprinosi rastu produktivnosti. Nabavne cijene opreme, potrošnog materijala i ostalih inputa u proizvodnom procesu također su niže pošto poduzeća nastupajući zajedno imaju veću pregovaračku moć u odnosu na subjekte izvan klastera. Ukoliko posjeduje pregovaračku moć, klaster može ispregovarati nižu cijenu ulaznih inputa što pridonosi snižavanju fiksnih troškova u proizvodnom procesu, a u konačnici vodi do rasta produktivnosti.

Uštede prilikom nabave sirovina i materijala mogu biti usmjerene za investicije u novu tehnologiju koja će pomoći u ostvarenju veće produktivnosti na način da se disperziraju fiksni troškovi preko veće količine proizvedenog outputa.

## 4. ZAKLJUČAK

U posljednjih godina akademska zajednica je posvetila značajan interes fenomenu poslovnih klastera kao i prednostima za poduzeća koje se ostvaruju njihovim formiranjem. Intenziviranjem konkurencije mijenjaju se i trendovi u organizaciji poslovanja, stoga se gubi značaj lokalnog povezivanja, dok se povećava značaj regionalnog, a pogotovo globalne organizacije poslovanja. U suvremenom okruženju razdaljina više ne predstavlja značajnu prepreku organizaciji poslovanja, što znači da tradicionalne prednosti klastera, u koje se ubrajaju: olakšani pristup radnoj snazi, pristup velikim lokalnim dobavljačima prelijevanje znanja, transportne i trans-

kacijske uštede gube na značaju premda su u nekim područjima (sjever Italije) i djelatnostima (drvena industrija) i dalje prisutne. U skladu sa suvremenim vremenom koje podrazumijeva globalizirano tržište, brzo mijenjanje trendova, snažnu konkurenciju, i eliminiranje prostora kao faktora komparativne prednosti, klasteri ostvaruju prednosti u vidu fleksibilizacije proizvodnih procesa, tehnologije, lakšeg ostvarivanja ekonomije obujma i jačanja inovacijskih kapaciteta. Sukladno potrebama dinamičnog tržišta realno je očekivati i daljnji razvoj klastera, glede novih modaliteta poslovanja koji za posljedicu imaju modernizaciju procesa s naglaskom na efikasnost i efektivnost sustava, jačanje inovacijskih kapaciteta te višu razinu specijalizacije.

## **NAPOMENA**

Rad je realiziran u okviru znanstvenog projekta “Razvoj upravljanje u funkciji integracije hrvatskog gospodarstva u EU” (podrška broj: 13.02.1.3.06.) uz potporu Sveučilišta u Rijeci.

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# PROMENA PARADIGME RAZVOJA I RASTA PRIVREDE POD UTICAJEM LIBERALIZACIJE TRŽIŠTA U SRBIJI

## CHANGING THE PARADIGM OF ECONOMIC DEVELOPMENT AND GROWTH UNDER THE INFLUENCE OF MARKET LIBERALIZATION IN SERBIA

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DOI:

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**Sadržaj:** U radu je prikazana promena privrede pod uticajima u poslednjih 20 godina na ograničenom tržištu kakva je Srbija. Na taj način ukazujemo na ogroman uticaj neprimetnih i u javnosti nedovoljno imenovanih mera koje su donosile vlasti posle revolucije 2000-te do danas. Prva od mera koja je potpuno promenila ekonomiju zemlje je ukidanje kontingenata. Uticaj ove promene je promenio ukupnu privrednu situaciju i narušio tadašnju privrednu strukturu koja se stvarala i razvijala pre i tokom devedesetih godina.

**Ključne reči:** Kontingenti, barijere, liberalizacija, dampinške cene.

**Abstract:** The paper presents the change of the economy under the influence in the last 20 years in a limited market such as Serbia. In that way, we point out the huge influence of inconspicuous and insufficiently known measures adopted by the authorities after the revolution of 2000 until today. The first of the measures that completely changed the country's economy is the abolition of contingents. The impact of this change changed the overall economic situation and disrupted the economic structure that was created and developed before and during the 1990s.

**Keywords:** Contingents, Barriers, Liberalization, Dumped prices.

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### 1. UVOD

Kako bi stvorili prikaze uticaja promena u privredi, u uvodu ćemo se osvrnuti na pojmove koji će biti osnova za prepoznavanje promena i ekonomsku situaciju koja je u to vreme vladala. Prvi pojam je **kontingent** koji predstavlja unapred ugovorenu količinu robe za uvoz ili izvoz. U vremenu od 1990. do 2000. godine, kontingente je izdavalo Ministarstvo trgovine i turizma i ono je imalo za cilj da ograniči uvoz strane robe, kako bi domaća proizvodnja imala prednost ili šansu za uspeh na tržištu. Sa druge strane, pomoću kontingentnog uvoza na tržištu se pojavljivala roba visokog kvaliteta sa visokim cenama, tako da su kupci ipak mogli da je kupe na našem tržištu. Na taj način, domaća proizvodnja je imala uzor za korekciju kvaliteta i tehnoloških procesa koji su bili najbolji u svetu. Domaća privreda, koja je opstala uprkos **ekonomskim sankcijama** i **hiperinflaciji** uspevala je da se polako razvija proizvođači širok spektar roba, kako poluproizvoda (uglavnom državna preduzeća), tako i gotovih proizvoda (privatne kompanije).

Pojam **barijere** ili blokade i ograničenja država je podizala tamo gde je želela da sačuva velike, a tromerke sisteme koji zapošljavaju veliki broj zaposlenih, što u kooperativi, i to u glavnim pogonima. Na taj način, pravila je uglavnom štetu kupcima koji nisu mogli da se snabdeju boljim proizvodima od naših. Najjasniji primer za to je kragujevačka Zastava koja je tokom devedesetih

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imala skromnu proizvodnju, a celokupno stanovništvo je zabranom uvoza polovnih automobila i zbog velikih taksa na nove automobile, bilo prinuđeno da vozi većinom te zastarele modele. To ipak nije pomoglo Zastavi da se prilagodi situaciji i da u proizvodnju uvede modele koji bi pratili novu tehnologiju i zahteve kupaca. Tako je društvo nosilo teret ovih blokada, plaćajući tu neracionalnu poslovnu igru u kojoj je tržište ograničeno samo na domaće proizvode.

Pojam *radničko samoupravljanje* vezano je za pojam *jednopartijski sistem* koji odražava ekonomski sistem u bivšoj SR Jugoslaviji do devedesetih do kada je državnim, javnim i društvenim preduzećima rukovalo radništvo u izabranim kadrovima. Dok je bilo jednopartijskog sistema, selekcija kadrova se vršila prema sposobnostima, te su na rukovodeća radna mesta još uvek dolazili kadrovi koji su se već dokazali na nižim zadacima. To je proizvelo uspešne kolektive koji su radili krupne projekte i u inostranstvu, na Bliskom i Dalekom Istoku, u nezavisnim zemljama širom sveta i u Rusiji, pa čak i u SAD-u (projekat YUGO). Dobri kadrovi su na taj način praksom stizali do rukovodećih mesta i to je napravilo razliku između naših preduzeća i onih koji su opstajali u zemljama istočnog fronta. U vreme kada je Jugoslavija zbog dobrog vođe Josipa Broza Tita imala jak uticaj u svetu, kako na nesvrstane, tako i na zemlje oba bloka, ova pozicija je obilatno korišćena da se razvijaju poslovi više nego što bi to moglo biti da smo nastupali bez ovog uticaja. Naši proizvodi nisu mogli da pariraju onim sa Zapada jer tehnološki i procesno nismo samostalno usavršavali proizvode, već smo išli na kupovinu licenci, koje su ograničavale razvoj proizvoda ili smo svoje proizvode branili barijerama. Retki su bili proizvodi koji su se takmičili ravnopravno na svetskom tržištu (Elan, Yugo Amerika).

Istraživanje i razvoj novih proizvoda nije bilo dovoljno dobro organizovano u preduzećima, te se dešavalo da mi i posle isteka roka licenci na proizvodima ništa ne menjamo, ako ne kupimo novu licencu. To je naše proizvode tehnološki ostavljalo na repu svetskog tržišta, a naše prodavnice su bile pune zastarele robe. Međutim, sa raspadom SR Jugoslavije i uvođenjem *višepartijskog* sistema prestala je sprega jednopartijskog sistema i samoupravljanja. Na rukovodeća mesta javnih i državnih preduzeća postavljani su partijski članovi, čime je ukinuta prirodna selekcija i uvedeno pravilo da je bitna pripadnost partiji, a ne znanje i sposobnost. Na ove negativne promene nadovezale su se *međunarodne sankcije* koje su otežale poslovanje cele privrede, jer su zabranjivale rad svim kompanijama koje su radile u inostranstvu, uvoz repromaterijala, sirovina, energenata, gotovih proizvoda i nove tehnologije, izvoz naših proizvoda i na taj način ograničile tržište domaćim preduzećima. Uz sve to, pod uticajem ratova koji su se vodili u okruženju, krenula je i *hiperinflacija* koja je narušila finansijski i fiskalni sistem zemlje, da bi 1999. godine usledilo i *bombardovanje Jugoslavije od strane NATO alijanse* koje je nesagledivo razorilo privredu i infrastrukturu zemlje. Na kraju je došlo do *političkih promena* kada nastaje ekonomski period koji posmatramo.

Stanje privrede pre posmatranog perioda od smene vlasti 2000. godine, u Srbiji je bilo sledeće: Takozvana „mala“ privreda je izgradila kapacitete i proizvode u mnogim oblastima. Najbolji kadrovi iz državnih, društvenih i javnih preduzeća su svoja prethodno stečena znanja primenila u svojim preduzećima i stvorila nebrojeno mnogo velikih, srednjih i malih privrednih kolektiva koja su uspešno gradila svoj put. Sa druge strane, od društvenih i državnih preduzeća opstala su vitalna preduzeća koja su se u datim okolnostima *zaštićenog tržišta* prilagodila smanjenom tržištu, kvalitetno odgovarajući na zadate zahteve tržišta. Privreda je uspela da održi na stotine takvih preduzeća koja su krčila put do novih, boljih vremena i uslova. Nijedno od tih preduzeća nije koristilo 100% svojih kapaciteta, ali je uspevalo da zajedno sa narastajućom privredom, koja je bila preduzetnička, formira svoje izmenjenje usluge, poluproizvode ili proizvode. Svima je trebalo osveženje i olakšanje privrednih uslova koji su se očekivali sa promenom vlasti.

## 2. LIBERALIZACIJA TRŽIŠTA NAKON POLITIČKIH (DRUŠTVENIH) PROMENA U SRBIJI 2001. GODINE

Nakon političkih promena, nastala je uslovljena liberalizacija tržišta ka Srbiji i liberalizacija tržišta uopšte na srpskom tržištu od strane propisa koji su štitili domaću proizvodnju. U isto vreme Evropska unija je dozvolila uvoz nekih dobara iz Srbije da bi podstakla i ohrabrila naše otopljanje, tj. liberalizaciju prema njenim proizvodima. Tako je Evropska unija ukinula carine na sve industrijske i poljoprivredne proizvode koji se izvoze iz Srbije u EU, sem malih izuzetaka. Usledilo je ukidanje kontingenata sa naše strane. Međutim, mi nismo mogli da ukinemo segmentirano kontingente, već smo to učinili prema svima. Ovo obaranje barikada iskoristili su uvoznici da bi u zemlju uvezli ogromnu količinu jeftine robe iz Turske, koja nije deo Evropske unije i gde ne važe pravila fer poslovanja. Tako je nagrnula roba sa fingiranim sniženim cenama da bi se plaćala simbolična carina na nju. To je pravilo poremećaj na tržištu, jer se uz domaću proizvodnju na tezgama našla roba jeftinija i do 40%. Ovo je mnoge proizvođače gotovih proizvoda nateralo da ugase svoj pogon, a da započnu distribuciju turske robe. To je smanjilo posao državnih i društvenih preduzeća koja su se bavila proizvodnjom poluproizvoda za domaće tržište (koža, tekstil, pozamanterija, đonovi i sl). Najveći pritisak je bio na industriju kože, obuće i tekstila. Već od početka 2003. godine na tržištu Srbije pojavila se ogromna količina gotove robe iz Kine. Ova zemlja je u to vreme radnu snagu plaćala od 20-50 dolara mesečno, te je njihova roba bivala jeftinija i do 20 puta. U Srbiju su ulazili kontejneri robe sa 40.000 pari obuće za 4.000 eura. Tako je ulazna cena proizvoda bila oko euro, dok je domaća proizvodnja po paru iznosila u proseku oko 20 eura. Količina uvezene robe je bila enormna i ubrzo su kineski proizvodi preplavili domaće tržište. Svi proizvođači gotovih proizvoda su se našli u problemu kako da nastave proizvodnju u takvom okruženju, pa je za manje od godinu dana ugašeno 95% pogona, a time i sva državna i društvena preduzeća koja su proizvodila poluproizvode za domaće tržište. Mali broj preduzeća koja su opstala na tržištu, imala su razrađenu liniju proizvoda koje su plasirali u Evropsku uniju. Nastao je efekat „spržene zemlje“, kompletna privatna i državna privreda koja se bavila tekstilom, kožom i obućom, plastikom i sličnim gotovim proizvodima prestala je da radi. Čitavi gradovi su, kao Novi Pazar, Kragujevac, Pančevo ostali bez posla i zarade. Ovo se ne nalazi u biltenima Zavoda za statistiku, jer se gro te robe inače prodavalo na crno, te je njihov nestanak sa tržišta ostao nezapažen. Na tržištu Srbije preko noći su se otvorile kineske robne kuće i trgovine koje su prodavale njihovu robu. Sa druge strane, veliki broj preduzetnika koji su se bavili trgovinom ili proizvodnjom navedenih proizvoda, a zapošljavali radnike koje nisu prijavljivali, prodavali su robu koju nisu evidentirali i za istu nisu plaćali PDV, počeli su da zatvaraju svoje firme. Za statistiku to su bile *firme fantomi*. O ovoj pojavi niko nije javno pisao. Uporedo sa nestajanjem domaće proizvodnje koju je zamenila roba iz Kine sa *dampinškim cenama* krenula je privatizacija domaće državne i društvene privrede. Od toga su izuzeta javna i državna preduzeća od posebnog interesa, kao što su elektroprivreda i železnički transport. Sve ostalo je prodato na tenderima ili direktnom prodajom sa stranim kupcima (NIS, JAT). Preduzeća poput cementara i duvanske industrije najlakše su našla kupce iz inostranstva. Preduzeća koja su imala problema sa tržištem, a imala su dobre proizvode (Železara Smederevo, RTB), našla su kupce u direktnoj pogodbi posle propalih tendera. Mnoga preduzeća su otkupili domaći preduzetnici, zbog poslovnog prostora u gradovima i zbog vrednog zemljišta, bez obaveze da zadrže radnike i proizvodnju. Postoje i mnoga preduzeća gde su domaći privrednici sačuvali radnike, pogone i proizvodnju uz restruktuiranje proizvodnje (Milan Blagojević Smederevo), ali ima i mnogo onih koji ni do danas nisu našli kupca. Mnogi njihovi bivši radnici su vraćeni na Biro rada, ostali su pronašli posao ili su penzionisani. Skoro kompletna stara preduzeća su nestala sa tržišta posle stečaja i tenderskih prodaja i postala su groblja u nekadaš-

njim industrijskim zonama gradova. Malo njih su poslužile kao magacini ili hale za braunfield investiranje novih privrednih pogona. Za sve to vreme, pokušaj upravljanja od strane partijskih kadrova doveo je do loših rezultata i mnogobrojnih korupcijskih afera. Ova negativna selekcija kadrova doprinela je opštem lošem stanju državne i društvene privrede. Društvena privreda je preregistrovana u državnu.

Pre svetske ekonomske krize krenulo se sa subvencionisanjem stranih investitora koji su dobijali finansijske i druge ustupke kako bi preselili svoju proizvodnju ovde. Gradovi su opremali industrijske zone, oslobađali od taksi, davali na korišćenje čak i nove hale, dok je država davala finansijske nagrade za zaposlenog radnika i u slučajevima braunfield investicija isplaćivala otpremnine za viškove radnika. Ovo je polako davalo dobre rezultate. Sa druge strane, bankarstvo u Srbiji je potpuno izmenjeno. Nestale su banke koje su finasirale nekadašnju privredu. Na taj način ukinuta su dugovanja privrede prema njima, ali i depoziti uspešnih preduzeća. Ubrzo su u ekspozituru i filijale ovih ugašenih banaka ušle strane banke. Iako je ovih banaka bilo mnogo više, konkurencija nije donosila niže, već više kamate na oročena sredstva i na kredite. Mala privreda nije dobijala povoljne kredite, jer su ove banke kreditirale samo strana preduzeća i stanovništvo. To je promenilo vlasničku strukturu privrede. Vlasništvo nad privrednim subjektima na početku promena je bilo u rukama države i domaćih preduzetnika, a danas je dobar deo privrednih subjekata, koji uspešno posluju, u stranim rukama.

Preduzetnici su, zbog raznih testova i maćehinskog odnosa države prema njima, slabo razvijali svoje programe a mnogi još uvek posluju u sivoj zoni. Tako vlast još uvek ne zna koliko je zaposlenih radnika u sivoj zoni i koliko je utajenog poreza, doprinosa i taksi. Posebno se ne zna koliko je sredstava izgubljeno od fingiranih dokumenata na carini, jer se snižavaju cene uvezene robe i do 20 puta.

Kada je reč o poljoprivrednoj proizvodnji tu se radilo drugačije. Zemlja je pretežno ostala u domaćim rukama. Iako nije vraćena ranijim vlasnicima, gradovi i opštine tenderima daju zemlju u zakup lokalnim poljoprivrednicima. Liberalizacija je kod poljoprivrednih proizvoda trebalo da otpočne u fazama 2009. godine i da se svake godine smanjuju carine koje su štitile domaće proizvođače. Ona nije striktno sprovedena, tako da je domaća poljoprivreda sačuvala i ojačala svoje kapacitete i nije izgubila vlasništvo nad zemljom. Organizovanje zadruga, otkupnih stanica i izgradnja kapaciteta hladnjača omogućili su poljoprivrednicima plasiranje njihovih proizvoda tako da je danas Srbija veliki proizvođač voća povrća, žitarica, mesa i mesnih prerađevina, mleka i ostalih poljoprivrednih i prehrambenih proizvoda. U poslednjih nekoliko godina država pomaže otvaranje zadruga, obnovu mašina, protivgradne zaštite, navodnjavanja, proizvodnju voća i povrća, pokriva štetu od poplava, požara i posledica gradonosnih oblaka.

Poseban odnos od 2015. godine država ima prema turizmu, aktivacijom vaučera za domaće goste, izgradnjom ski staza, podrškom seoskom turizmu, što je dovelo do velikog rasta prihoda. Razvoj raznih turističkih manifestacija širom Srbije doprinele su da neke postanu svetski poznate i da privlače goste iz celog sveta.

### **3. ZAKLJUČAK**

Napuštajući privredu protekcionizma, Srbija se suočila sa jakom konkurencijom (dampingškom), koja je napravila veliku štetu gaseći sve proizvodne kapacitete koji su opstajali i razvijali se uz zaštitu od neloyalne konkurencije. Zaštita je bila prenaplašena, tako da smo činili medvedu uslu-

gu mnogim državnim i društvenim preduzećima koja se nisu prilagođavala promeni tehnologije, smanjenju troškova poslovanja, inovacijama kako poluproizvoda i proizvoda, tako i procesa proizvodnje. To je toliko oslabilo preduzeća da, po ukidanju protekcionističkih mera nisu imali adekvatan odgovor na ponudu stranih konkurenata. Sledilo je gašenje ili preuzimanje od stranih konkurentskih kompanija, koje su smanjile broj radnika, donele novu savremenu tehnologiju i nove procese poslovanja. Na taj način, jedan broj radnika je našao uhlebljenje u novim kompanijama, ali je celokupan profit ostao u rukama stranaca. Oni su dobili kompletnu infrastrukturu, pogone i obučene radnike kao jeftinu radnu snagu, plaćajući za njih nekad i marginalnu cenu.

Primer je prodaja Železare Smederevo američkoj firmi US Steel, koja je prodana tajnim pregovorima bez tendera, za marginalnih 22 miliona dolara, što je nekoliko stotina puta manja vrednost od one koju je imala u trenutku kupovine tehnologije. Iako statistika ne beleži promene, pošto u nju zbog izuzetno izraženog rada na crno nisu zahvaćene industrijske grane proizvodnje tekstila, kože, obuće i poluproizvoda (veliki broj proizvodnih pogona za državu nije postojao, nije proizvodio i nije imao zaposlene, iako su imali po nekoliko stotina radnika), one su se desile. 95% ovih pogona zbog ove promene na tržištu se ugasilo, a sa njima i svi pogoni državnih i društvenih preduzeća koja nisu imala za koga više da proizvode. Preostalih 5% preduzeća su nastavila proizvodnju za strano tržište, koristeći uvozne sirovine i poluproizvode. Ova drastična promena nije nigde zabeležena, jer niko nije smeo da iznosi problem. Svi su proizvodili, ne plaćajući državi svoje obaveze. Iz ovoga se može zaključiti da su pojedine barijere gde su industrijske grane pratile tehnologiju i usavršavale svoje proizvode zbog toga što su se takmičile na unutrašnjem tržištu, pogrešno ukinute što je dovelo do potpunog urušavanja i gotovo nestajanja ovih privrednih grana. Službe inspekcije, koje su trebale da pronađu sve te proizvodne firme nisu bile dovoljno revnosne da to i učine. Time bi statistička slika bila jasnija, a budžet daleko puniji. Uz nju su nestala sva mala i mikro preduzeća i preduzetnici koji su se bavili prodajom ove robe u svojim buticima i prodavnicama obuće, uglavnom na crno, bez izdavanja fiskalnih računa. Na njihovo mesto došli su Kinezi sa svojim mega šopovima u kojima su prodavali obuću i tekstil sa mnogostruko nižim cenama.

Dodatan problem je nastao zbog „štimovanja uvoznih papira“ prilikom carinjenja ovih proizvoda što je dodatno marginalizovalo njihove troškove i umanjivalo cenu proizvoda u radnjama. Na sve to možemo dodati i tradicionalno nefikasno kontrolisanje od strane inspektora i činjenicu da su ovi strani preduzetnici oslobođeni od obaveze da izdaju fiskalne račune i da prijavljuju radnike. Na taj način i danas država gubi ogroman priliv od carina, doprinosa za zaposlene i PDV-a. Da nije toga, vlasti bi prepoznale problem koji je ostao nezapažen. Na kraju, najveći broj zaposlenih je ostao bez posla. U industrijskim granama koje nisu razvile svoje procese i proizvode, a imali su jake zaštite od stranih proizvoda, skidanjem barijera ostale su bez posla jer njihovi proizvodi nisu mogli da izdrže utakmicu koja se razvijala na slobodnom tržištu Evrope. Tako je tržišno bolestan deo naše privrede nestao jer se nije prilagođavao promenama, za vreme deset godina izolacije sve do bombardovanja zemlje.

Problem je višeslojan, ali mogu se izvući neki zaključci. Tehnologija proizvodnje, procesi i sami proizvodi u tom desetogodišnjem periodu nisu menjani, a nije bilo moguće kupovati novu tehnologiju, patente. Poseban problem je bio u odlivu najboljih kadrova koji su vodili firme ili usavršavali proizvode i procese. Na njihovo mesto su dolazili partijski kadrovi nedovoljno umešni da se upuste u tržišnu borbu. Moramo zaključiti da je partijsko kadrovanje donelo velike probleme u radu privrede uopšte i da su slabi rezultati održavani samo u *monopolskim uslovima* kakve su stvorila javna preduzeća. Preobimna zaposlenost, veliki troškovi i gubici ravnjani su na zatvore-

nom tržištu podizanjem cena proizvoda. Ova negativna selekcija hiruški je presečena ukidanjem barijera, a da pomoći za naša oslabljena preduzeća nije bilo. Prepušteni su surovom tržištu na kome su opstajali samo oni koji su razvijali svoj proizvod ili koji su ostali zaštićeni monopolima. Mnoga preduzeća su se dokapitalizovala i pronašla svoje tržište u novim uslovima. Sa druge strane, ostala su preduzeća koja nisu bila spremna, jer nisu gradila svoje brendove, proizvode, tehnologiju i procese. Postepeno, uz velike olakšice, u zemlju je ulazila nova tehnologija kroz strana preduzeća koja je popunjavala prazninu nastalu iza propasti nekadašnjih preduzeća.

U svakom gradu Srbije i dalje je mnogo napuštenih hala u kojima su se gradili složeni proizvodi (vagoni, traktori, kombajni, tenkovi, vojna industrija, razne mašine, motori i dr.). U industriji koja se bazirala na poljoprivredu, opstala su preduzeća koja su proizvodila već dobro brendirane proizvode, i privredna gazdinstva koja su snabdevala megamarkete, hladnjače, otkupljivače i izvoznike. Ovde je ukidanje blokada trajalo mnogo duže, a zakon nije dozvoljavao da strane kompanije budu vlasnici zemlje. Tako je poljoprivreda mnogo bolje prošla, a sa njom i sva predaivačka industrija koja je gradila svoje proizvode.

Na kraju, zaključujemo da je ukidanje barijera i kontingenata bilo neophodno, da bi prevelo prvrednu na nove tržišne uslove, ali da je u slučaju industrijskih grana kao što su tekstil, koža i obuća, to učinjeno naglo bez podrške domaćim proizvođačima što je uništilo već dobro razvijene grane. Skinute su barijere i one koje bi zaštitile proizvođače od nelojalne konkurencije ili dampinških cena, usled čega smo ostali bez desetine hiljada radnih mesta. Ova neopreznost dodatno je urušila kompletnu privredu i snizila bruto nacionalni dohodak, poslala mnogo ljudi na Biro rada i oslabila tržište koje je ostalo bez domaćih proizvođača i domaćih trgovaca (butikaša), a preduzetnici koji su dobro razvili svoje proizvodne pogone prestali su time da se bave.

#### 4. POJMOVNIK

**Kontingent** je pravilnik o uvozu robe po osnovu carinskog kontingenta. Korisnik carinskog kontingenta podnosi ministarstvu finansija (ranije trgovine) pismeni zahtev za odobrenje carinskog kontingenta za uvoz robe. (1)

**Kontingenti** predstavljaju količine, odnosno vrednosti robe koje je moguće uvesti u toku određenog perioda. Obim, odnosno vrednost kontingenata, utvrđuje vlada određene zemlje. (2)

**Međunarodne ekonomske sankcije.** Međunarodne sankcije su u pravilu nenasilne akcije koje određene države preduzimaju protiv drugih država kako bi ih prisilile na promenu pojedinih aspekata spoljne i unutrašnje politike koje drže neprihvatljivim. Po tome da ih preduzima jedna država ili međunarodna organizacija dele se na uniteralne ili multiteralne. Ekonomske sankcije se obično odnose na zabranu trgovine najčešće vezanu za oružje, hranu, lekove i goriva. (3)

**Dampinške cene:** Damping podrazumeva prodaju određene robe na stranom tržištu po cenama nižim od normalnih tržišnih cena, da bi se pobedila konkurencija na stranom tržištu. (4)

**Damping:** Prodaje robe po ceni ispod normalne vrednosti u cilju osvajanja novog tržišta ili ostvarivanja većeg obima prodaje robe na određenom tržištu, poznata je po imenom “**damping**”.

Damping, kao strategija prodaje proizvoda, neće naneti štetu domaćoj industriji ako je visina carinskih stopa na tom nivou da neutrališe efekte sniženja cene ispod njene normalne vrednosti.



Međutim, svaki izvoznik će se truditi da nivo sniženja prodajne cene ispod normalne vrednosti, (odnosno dampinška marža), bude tolika da postojeći nivo carinskih stopa nije dovoljan da zaštiti domaću industriju. (5)

**Barijere** za ulazak na tržište se vezuju za monopolske tržišne strukture, odnosno stanje na tržištu na kome učestvuje jedan privredni subjekat koji posluje pod uslovima i po ceni na koje ima znatan uticaj. Načelno, monopolsko organizovanje je dopušteno, ali samo ukoliko pozitivno utiče na efikasnost privređivanja smanjujući troškove proizvodnje robe, kada je zapravo reč o postojanju prirodnih monopola. Ipak, savremeni oblici monopolskog organizovanja pokazuju sklonost ka sticanju ekstraprofita, koncentraciji kapitala monopoliste, te samim tim i umanjanju nacionalnog blagostanja. Stoga je neophodna intervencija države kroz brojne regulatorne mere i osnivanje nadležnih tela zaduženih za nadgledanje i očuvanje konkurentskih tržišnih odnosa. Vršeci ove svoje makroekonomske funkcije, država sprovodi antimonopolsku politiku, a da bi bio ostvaren postavljeni cilj, očuvana konkurentnost na tržištu i podstaknuta preduzetnička inicijativa, antimonopolska politika mora biti uravnotežena i dovoljno fleksibilna, ni previše stroga ni previše blaga. (6)

**Hiperinflacija** je inflacija koja je potpuno van kontrole, stanje kada cene veoma brzo rastu dok valuta gubi svoju vrednost. (7)

**Radničko samoupravljanje** je oblik radničkog odlučivanja u preduzećima, u kojem radnici sami biraju i odlučuju (oko pitanja kao što su briga o korisnicima, opšte metode proizvodnje, planiranje, podela rada i sl.), umesto vlasnika ili tradicionalnih nadzornika koji su radnicima naređivali šta učiniti?, kako to učiniti? i gde to učiniti?. Radničko samoupravljanje je vrlo čest model odlučivanja koji se koristi u onim delovima ekonomskog sistema gde postoji zajednička imovina kao što su radničke zadruge, radnička veća, participativna ekonomija (radničko dioničarstvo), i slični aranžmani u preduzeću, gde se radi bez vlasnika (gazde). Donošenje odluka se ne odnosi na konsultovanje svih zaposlenih za bilo koji mali problem, jer bi to bilo dugotrajno i neefikasno. Primeri iz dosadašnje prakse, pokazuju da se samo velike odluke donose od strane svih zaposlenih tokom sastanaka radničkog veća, dok male odluke donose oni koje su radnici ovlastili da ih sprovode i vrše koordinaciju s ostalima i slede generalne crte dogovorenog. (8)

**Jednopartijski sistem** je autoritativni i totalitarni oblik državnog uređenja sa jednom političkom partijom koja postavlja sve državne funkcionere iz svojih redova i vrši uticaj na sve delove društva. U najvećem broju slučajeva druge partije bivaju stavljene van zakona. (9)

**Višepartijski sistem** je društveno-političko uređenje koje dozvoljava osnivanje i delovanje više od jedne političke stranke koje imaju kapacitet da dođu na vlast samostalno ili u koaliciji. Ovaj sistem ohrabruje formiranje više različitih zvanično priznatih grupa koje se generalno zovu političke partije. (10)

**Bombardovanje Jugoslavije od strane NATO alijanse** ili Nato agresija bila je završna faza rata na Kosovu i Metohiji koja je trajala od 24. marta do 10. juna 1999. godine. Intervencija NATO-a je izvršena bez odobrenja Saveta bezbednosti zbog optužbi da srpske snage bezbednosti vrše etničko čišćenje kosovskih Albanaca. (11)

**Političke (društvene) promene** Naglašena je razlika između promene režima kao oblika političke vlasti i promene društvenog sistema kao celokupne promene osnovnih podсистema, društve-

nih institucija i društvenih odnosa. Kada je reč o promeni režima, govori se o ireverzibilnosti povratka na autokratski režim. (12)

**Liberalizacija tržišta nakon političkih promena:** Ključna faza u procesu tranzicije u Jugoslaviji 2001. godine je liberalizacija. Ona podrazumeva proces smanjivanja trgovinskih barijera, kako na internom, tako i na eksternom nivou, kao i slobodno formiranje cena na tržištu (pre svega u zavisnosti od ponude i tražnje). (13)

**Monopolski uslovi.** Monopoli kao vid tržišnog uređenja privrede su situacije kada je privreda organizovana tako da u njenim delovima (granama) postoji jedan ili nekoliko glavnih ponuđača, nasuprot velikom broju potencijalnih kupaca. Ovde treba naglasiti da se termin monopol upotrebljava u širem žargonu, tj. ponuda je koncentrisana na jednog ili mali broj ponuđača, mada prava definicija monopola glasi da postoji samo jedna ponuđač. (14)

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**ŠUMSKI POŽAR NA STAROJ PLANINI 2019. GODINE  
– EKOLOŠKE I EKONOMSKE ŠTETE NA POVRŠINAMA  
KOJIMA GAZDUJE JP „SRBIJAŠUME“**

**FOREST FIRE ON THE STARA PLANINA IN 2019  
– ECOLOGICAL AND ECONOMIC DAMAGES ON THE AREAS  
OWNED BY JP “SRBIJAŠUME”**

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DOI:

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**Apstrakt:** Šume u Srbiji zauzimaju gotovo trećinu njene teritorije (29,1%). Šume su presudan faktor za očuvanje više od 80% ukupnog biodiverziteta u Srbiji i predstavljaju značajan faktor za ublažavanje negativnih posledica klimatskih promena.

Najveće ekološke i ekonomske katastrofe koje mogu da zadese šumske ekosisteme izazivaju šumski požari. Oni predstavljaju veliki i aktuelan društveni, privredni i ekološki problem.

Šumski požari uništavaju ekosisteme, biodiverzitet i ostavljaju nesagledive negativne posledice na životnu sredinu čitavih područja. Kao destruktivna pojava izazivaju (najdestruktivniji izazivači) neprocenjivo veliku ekološku i ekonomsku štetu.

Učestalost požara i površina koju oni zauzimaju raste iz godine u godinu. Imajući u vidu klimatske promene i rast prosečnih godišnjih temperatura vazduha, tematika šumskih požara sve više dobija na značaju.

Cilj rada je da na primeru šumskog požara na Staroj planini, koji se dogodio u jesen 2019 godine, da metodiku za utvrđivanje direktnih šteta i računanje gubitaka na umanjenoj vrednosti drvne zapremine. Drugi cilj je da se prezentuju najznačajniji elementi i podaci o nivou i karakteru šteta na šumama, sa posebnim naznakama o nivou šteta na opožarenim površinama koje su u državnom vlasništvu. Rad će dati pregled obima šteta kroz površinu, drvnu zapreminu i na toj osnovi utvrditi direktne štete opožarene drvne zapremine i okvirnu projekciju nastalih šteta na površinama kojima gazduje JP „Srbijašume“. U tim okvirima prikazaće se procena obima ekoloških šteta u državnim šumama na opožarenom području.

**Cljučne reči:** Šumski požar, Stara planina, Ekološke štete, JP<sup>5</sup> „Srbijašume“.

**Abstract:** Forests in Serbia occupy almost a third of its territory (29.1%). Forests are a crucial factor in preserving more than 80% of the total biodiversity in Serbia and are a significant factor in mitigating the negative effects of climate change.

The biggest ecological and economic catastrophes that can hit forest ecosystems are caused by forest fires. They represent a major and current social, economic and environmental problem.

Forest fires destroy ecosystems, biodiversity and leave unforeseeable negative consequences on the environment of entire areas. As a destructive phenomenon, they cause (the most destructive causes) inestimable great ecological and economic damage.

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*The frequency of fires and the area they occupy is growing from year to year. Having in mind climate change and the growth of average annual air temperatures, the topic of forest fires is gaining in importance.*

*The aim of the paper is to use the example of the forest fire on Stara Planina, which occurred in the fall of 2019, to provide a methodology for determining direct damage and calculating losses on the reduced value of wood volume. The second goal is to present the most important elements and data on the level and character of damage to forests, with special indications on the level of damage to the burned areas that are state-owned. The paper will give an overview of the extent of damage through the area, wood volume and on that basis determine the direct damage to the burned wood volume and the approximate projection of the damage on the areas managed by JP "Srbijasume". Within this framework, an assessment of the extent of environmental damage in state forests in the burned area will be presented.*

**Keywords:** Forest fire, Stara planina, Environmental damage, JP "Srbijasume".

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## UVOD

Aleksić, Baković i Kisin (2013) ističu da šume u Srbiji igraju veoma važnu ulogu u zaštiti životne sredine, sa velikim brojem regulatornih i zaštitnih funkcija (zaštita voda i vodosnabdevanja, zaštita od erozije, poboljšanje hidroloških svojstava zemljišta, balansiranje hidrološkog ciklusa, zaštita biodiverziteta itd.).

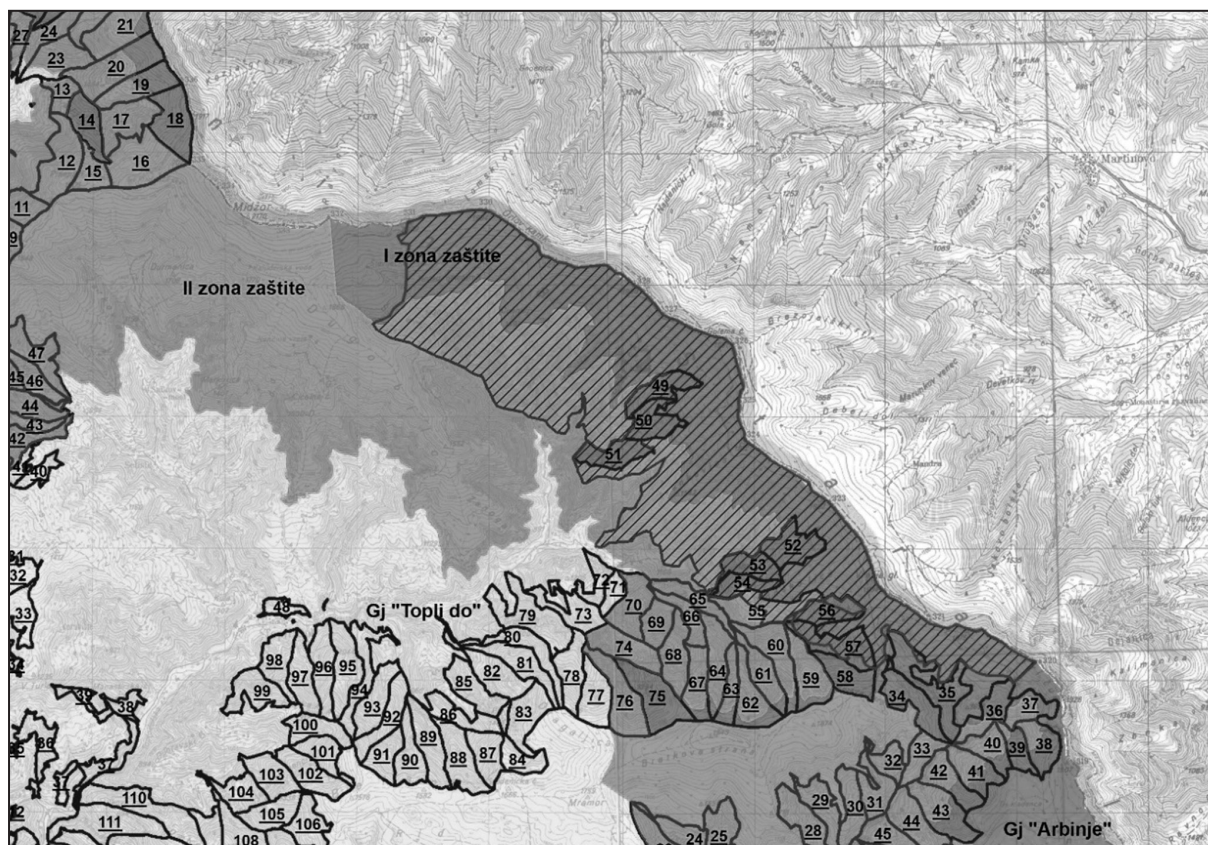
Šumski požar koji se dogodio na Staroj planini u oktobru 2019. godine izazvao je ekološku katastrofu, imajući u vidu da je Stara planina Park prirode od 1997. godine. Park prirode „Stara planina” zauzima ukupnu površinu od 142.219,64 ha, regionalno pripada istočnoj Srbiji. „Vlada Republike Srbije je poverila na staranje Park prirode „Stara planina“ Javnom preduzeću za gazdovanje šumama „Srbijašume“. JP „Srbijašume“ poslove zaštite, razvoja i održivog korišćenja Parka prirode „Stara planina” obavlja preko svojih Šumskih gazdinstava: ŠG „Timočke šume“ iz Boljevca, Šumska uprava Knjaževac, Šumska uprava Zaječar i Šumskog gazdinstva „Piroć“ iz Pirota, Šumska uprava Piroć, („OGŠ za GJ Stara planina II –Topli“ 2012-2021).

Požar je prešao iz susedne Bugarske i zahvatio šume i nisko rastinje (karta br.1). Republika Srbija je preduzela sve potrebne mere da šumski požar što pre stavi pod kontrolu.

Na 1100 - 1900 metara nadmorske visine Stare Planine vatrogasci, šumari i lokalno stanovništvo gasili su požar na nepristupačnom terenu. Gašenje požara na taj način nije dalo rezultate usled jakog vetra.

Iz tog razloga angažovan je avion za gašenje šumskih požara „Iljušina 76“. Iljušin je u dva leta ispustio 164 tone vode na požarom zahvaćene lokacije što je dovelo do toga da se požar uspešno stavi pod kontrolu na svim lokacijama, a kasnije uspešno i ugasi.

Cilj rada je da prikaže metodiku za utvrđivanje direktnih šteta i računanje gubitaka na umanjenoj vrednosti drvne zapremine na celoj opožarenoj površini. Ova metodika može u budućnosti poslužiti kao model u operativnom planiranju pri izradi sanacionih planova. Drugi cilj je da utvrdi najznačajnije elemente i podatke o nivou i karakteru šteta na šumama koje je izazvao ovaj požar. Rad obrađuje podatke koji se odnose na obim šteta na opožarenoj površini, drvnoj zapremini (utvrdiće se obim direktne štete opožarene drvne zapremine) na površinama kojima gazduje JP „Srbijašume“. Na kraju rad daje okvirnu procenu obima ekoloških šteta u šumama na opožarenom području.



Karta br.1. Opožarena (šrafirano crveno) površina na području Stare Planine

Ugroženost šuma od požara je rezultat pre svega konstantnog opterećenja životne sredine, proširenja izvora ugrožavanja kao i nepotpunog pridržavanja odredaba iz regulative u zaštiti šuma od požara. Rezultati ovog rada ni na koji način neće odrediti obim sanacije opožarenih šuma. Zakonski, sanacija šuma oštećenih usled požara će biti definisana Sanacionim planom.

## 2. MATERIJAL I METOD RADA

### 2.1. Polazne osnove

U radu su korišćeni različiti empirijski (statistički) podaci o stanju šuma u okviru JP „Srbijašume“, ŠG „Pirot“ Pirost, GJ<sup>6</sup> „Stara planina II – Topli Do“ i GJ „Stara planina II – Arbinje“ koji su predstavljeni u vidu tabela. Podaci su poreklom iz sastojinske inventure šuma JP „Srbijašume“, sa zatečenim stanjem šuma na dan 31.12.2018. godine.

*Podaci o štetama koje je izazvao šumski požar su preuzeti iz internog izveštaja o obimu šteta kojeg su sačinile stručne službe JP „Srbijašume“ („Interna dokumentacija JP „Srbijašume“ – Beograd“, 2019).*

### 2.2. Problemi istraživanja

U JP „Srbijašume“ do sada još nije sprovedeno ovakvo istraživanje na području gde se desio požar. Ovako istraživanje dobija na značaju imajući u vidu da je požar zahvatio delove Parka prirode „Stara planina“.

<sup>6</sup> GJ – gazdinska jedinica;

### 3.2. Hipoteze

- Pretpostavljamo da se šumski požar na Staroj planini nije mogao predvideti;
- Pretpostavljamo da je požar izazvao velike direktne štete;
- Požar na Staroj planini je u značajnoj meri kod oštećene drvne zapremine umanjio tehničke klase drveta;
- Očekuje se da će obimi ekoloških šteta u značajnoj meri prevazići obim direktnih šteta.

#### 1.1. Zadatak istraživanja

- **Utvrđiti stanje šuma i šumskog zemljišta na ugroženom području;**
- Utvrđiti visinu šteta po površini, drvnoj zapremini, izazvanih šumskim požarom;
- Utvrđi (okvirno) obim direktnih šteta;
- Utvrđiti vrednosti štete na drvnim sortimentima koja je prouzrokovana požarom;
- Proceniti obim ekoloških šteta;
- Dati zaključak istraživanja;

Napomena: Zadatak istraživanja se odnosi na opožarenu površinu kojom gazduje JP „Srbijašume“.

### 3.3. Metod rada

Granice opožarenih površina su snimljene uređajem Trimble Juno ST koji u sebi ima integrisan GPS. Pomoću Trimble Juno ST su prikupljeni podaci za GIS. Prikupljeni podaci su obrađeni u Trimble® TerraSync™ softveru.

Metodološki postupak korišćen pri izradi ovog rada je u osnovi analitičko sinteznog karaktera. Pri izradi ovog rada konsultovana je međunarodna i domaća stručna literatura. Korišćeni naučni metodi pri istraživanju su: metod analize, sinteze, apstrakcije konkretizacije i specijalizacije.

U radu su korišćene i statističke metode: deskriptivna i analitička, a podaci i rezultati prikazani su putem tabela. U skladu sa zadatkom rada korišćena je deskriptivna metoda.

### 3.4. Uzorak

Za uzorak je uzeta opožarena **u okviru JP „Srbijašume“, ŠG „Pirot“ Piro, GJ „Stara Planina II – Topli do“ i GJ „Stara Planina II – Arbinje.**

## 4. REZULTATI I DISKUSIJA

### 4.1. Stanje opožarene površine na Staroj Planini – sa akcentom na opožarenu površinu koja je u okviru JP „Srbijašume“

Uvažavajući do sada prikupljene podatke ukupna površina zahvaćena požarom (sve u okviru PP „Staroj planina“) je 2.107 ha. Od toga su izgoreli pašnjaci i površine pod klekom na 1.437 ha, a opožarena površina pod šumom je 670 ha.

Navedeni podaci su dobijeni preklapanjem karte požara sa rasterom zemljišnog pokrivača.

Ukupno je opožareno obraslog (površine pod šumama) 550 ha (232 ha u državnom vlasništvu i 318 ha u privatnom vlasništvu) i neobraslog zemljišta (pašnjaci i livade) na ukupnoj površini od 1.558 ha.

Požar u okviru PP „Stara planina“ zahvatio je delove lokaliteta:

1. „Orlov Kamik-Kopren“, u kojem je utvrđen režima zaštite prvog (I) stepena na ukupnoj površini od 1.365 ha, i
2. „Sveti Nikola–Jabučko ravnište–Srebrna glava“, na teritoriji KO Topli do i KO Dojkinci, koji se nalazi u okviru režima zaštite drugog (II) stepena, na ukupnoj površini od 743 ha.

Požar koji se dogodio na Staroj planini je zahvatio privatne posede i državne posede i to: GJ „Stara planina II – Topli Do“ i GJ „Stara Planina II – Arbinje. Ove GJ se nalaze u privrednom smislu podele prostora u sastavu Nišavskog šumskog područja kojim gazduje Šumsko gazdinstvo „Piroć“, Piroć, preko šumske uprave „Piroć“ i sastavni su deo JP „Srbijašume“, Beograd. GJ se celokupnom površinom nalaze u okviru Parka prirode „Stara planina“.

**Tabela 1.** Opožarene obrasle i neobrasle površine, drvena zapremina u državnom vlasništvu, kojima gazduje JP „Srbijašume“.

Odeljenje	Odsek	Površina (P)	Opožarena (P)	Zapremina (V)	Ukupna (V)	Opožarena (V)
		ha	ha	m <sup>3</sup> /a	m <sup>3</sup>	m <sup>3</sup>
49	1	0,31	0,31			
49	2	2,11	2,11			
49	3	0,26	0,26			
49	4	0,96	0,96			
49	5	0,51	0,51			
49	6	0,56	0,56			
49	a	24,08	24,08	523	12.601	12.601
49	b	4,24	4,24	75	318	318
50	1	0,8	0,8			
50	2	0,52	0,52			
50	3	0,56	0,56			
50	4	0,29	0,29			
50	5	1,53	1,53			
50	a	30,26	30,26	538	16.292	16.292
51	1	4,96	4,96			
51	a	16,96	16,96	474	8.044	8.044
51	b	5,16	5,16	140	723	723
51	c	2,8	2,8			
51	d	3,12	3,12	144	449	449
52	1	0,88	0,88			
52	2	1,26	1,26			
52	3	0,72	0,72			
52	a	34,72	34,72	589	20.460	20.460
52	b	3,6	3,6	45	162	162
53	1	5,92	5,92			
53	2	0,27	0,27			
53	3	0,22	0,22			
53	a	7,04	7,04	373	2.629	2.629
53	b	18,45	18,45	457	8.426	8.426

54	1	0,57	0,57			
54	2	0,07	0,07			
54	a	10,32	10,32	189	1.950	1.950
54	b	8,86	8,86	527	4.671	4.671
54	c	0,64	0,64	45	29	29
55	1	1,25	1,25			
55	2	1,53	1,53			
55	3	1,76	1,76			
55	a	29,82	20,5	336	10.011	6.882
56	2	0,48	0,48			
56	a	16,95	12,23	521	8.836	6.375
56	b	15,12	10,56	461	6.964	4.864
57	2	0,67	0,67			
57	3	0,25	0,25			
57	4	0,11	0,11			
57	5	0,26	0,26			
57	6	0,8	0,69			
57	7	13,01	10,76			
57	a	13,6	10,72	463	6.300	4.966
57	b	18,4	9,14	358	6.593	3.275
35	b	27,5	1,72	313	8.610	539
<b>Ukupno</b>		<b>335,04</b>	<b>276,16</b>		<b>124.069</b>	<b>103.656</b>

Požar (tabela broj 1.) je zahvatio ukupno 50 odseka i čistina i opožario državni posed od 276,16 ha. Opožareno je 235,12 šuma i to: Visoke (jednodobne i raznodobne) šume bukve, Visoke (grupimično-raznodobne) šume smrče, Visoke (grupimično-raznodobne) smrče, jele i bukve visoke genske, specijske i ekonomske vrednosti i devastirane šume bukve na 9,96 ha i jednu šikaru kitnjaka površine 2,8 ha. Požar je zahvatio i 41,04 ha neobraslih površina i to: pašnjaka, goleti, livada, suvata i šumskih puteva.

#### 4.2. Štete od požara

*Uloga šumskih ekosistema je nezamenljiva i njihova kompleksnost sa ekološkog uticaja, kao stabilizirajućeg faktora funkcionisanja biosfere je nesaglediva (Baković, Z., 2016).*

Rad će utvrditi štete od požara samo na šumama kojima gazduje JP „Srbijašume“.

Da bi se utvrdio obim direktnih šteta od požara prvo je utvrđena vrednost šume na panju na opožarenoj površini pre izbijanja požara. Do vrednosti drvne zapremine u apsolutnom iznosu po vrstama drveća i sortimentima se došlo na osnovu projekcije relativnih udela sortimenata za bukvu i smrču (tabele broj 2. i 3.) a na osnovu podataka o realizovanoj drvnoj zapremini iz ovih ili susednih odeljenja. Na toj bazi su utvrđeni koeficijenti po vrstama drveća i sortimentima.

Preko procenjenih redukcionih koeficijenata po vrstama drveća (tabele 3. i 4.) i sortimentima došlo se zapremine posle požara. Iz priloženih tabela se jasno vidi da je na drvnoj zapremini posle požara u svim sastojinama i vrstama drveća značajno uvećan šumski ostatak i umanjeno udeo trupaca po obimu i tehničkim klasama.



ŠUMSKI POŽAR NA STAROJ PLANINI 2019. GODINE – EKOLOŠKE I EKONOMSKE ŠTETE  
NA POVRŠINAMA KOJIMA GAZDUJE JP „SRBIJAŠUME“

**Tabela 2.** Relativni odnosi sortimenata bukve u sastojinama koje je pogodio požar  
– pre pojave požara

Буква	49a	49b	50a	51a	51b	51c	51d	52a	52b	53a	53b	54a	54b	54c	55a	56a	56b	57a	57b
<b>Групци %</b>	<b>34,00%</b>		<b>38,00%</b>	<b>35,00%</b>				<b>48,00%</b>		<b>31,99%</b>	<b>39,01%</b>		<b>38,99%</b>		<b>38,00%</b>	<b>43,00%</b>		<b>33,99%</b>	<b>31,97%</b>
F/1	0,10%		0,08%					0,14%		0,03%	0,08%		0,04%		0,04%	0,13%		0,03%	0,03%
F/2								0,10%		0,03%	0,04%					0,02%			
F/3																0,02%			
L/1	0,58%		0,42%	0,70%				1,44%		0,74%	0,62%		0,82%		0,91%	0,69%		0,71%	0,77%
L/2	0,68%		0,87%	0,35%				0,96%		0,32%	0,31%		0,43%		0,23%	0,21%		0,37%	0,35%
L/3	0,34%		0,30%	0,35%				0,96%		0,16%	0,12%		0,19%		0,08%	0,13%		0,20%	0,16%
K/1	0,68%		0,57%	0,74%				1,92%		2,02%	1,17%		1,21%		1,33%	2,49%		1,16%	1,69%
K/2	1,02%		0,99%	0,91%				0,72%		1,02%	5,85%		0,55%		0,61%	0,56%		0,65%	1,02%
K/3	0,34%		0,57%	0,18%				0,48%		0,64%	0,39%		0,39%		0,23%	0,17%		0,41%	0,70%
I/1	5,10%		5,55%	5,25%				4,32%		5,21%	5,54%		5,46%		5,51%	6,06%		5,13%	4,92%
I/2	3,40%		3,57%	2,80%				5,76%		4,19%	4,29%		3,63%		3,61%	3,74%		3,74%	3,71%
I/3	1,70%		3,27%	2,28%				3,36%		1,63%	1,91%		2,03%		2,43%	2,32%		2,18%	2,75%
II/1	3,74%		3,57%	4,90%				7,20%		4,48%	6,24%		5,07%		5,32%	6,97%		4,35%	4,28%
II/2	2,72%		4,56%	2,98%				5,28%		2,88%	3,90%		3,51%		2,89%	4,77%		3,20%	2,88%
II/3	3,40%		4,14%	2,80%				4,18%		1,60%	2,34%		2,53%		2,17%	2,67%		2,28%	1,60%
III/1	5,10%		5,24%	5,60%				5,18%		3,84%	3,28%		5,58%		6,19%	7,35%		4,32%	3,90%
III/2	3,74%		3,42%	3,26%				3,60%		1,92%	2,03%		4,13%		3,72%	3,18%		3,03%	1,92%
III/3	1,36%		0,87%	1,93%				2,40%		1,28%	0,90%		3,43%		2,72%	1,48%		2,24%	1,28%
<b>Огрев %</b>	<b>66,00%</b>	<b>100,00%</b>	<b>62,00%</b>	<b>65,00%</b>	<b>100,00%</b>		<b>100,00%</b>	<b>52,00%</b>	<b>100,00%</b>	<b>68,01%</b>	<b>60,99%</b>	<b>100,00%</b>	<b>61,01%</b>	<b>100,00%</b>	<b>62,00%</b>	<b>57,00%</b>	<b>100,00%</b>	<b>66,01%</b>	<b>68,03%</b>
I кл	33,66%	51,00%	31,62%	33,16%	51,00%		51,00%	26,52%	51,00%	34,67%	31,11%	51,00%	31,10%	51,00%	31,62%	29,06%	51,00%	33,68%	34,66%
II кл	5,94%	9,00%	5,58%	5,84%	9,00%		9,00%	4,68%	9,00%	6,14%	5,48%	9,00%	5,51%	9,00%	5,58%	5,14%	9,00%	5,94%	6,21%
Сеченица																			
Вишметарско I кл	22,44%	34,00%	21,08%	22,11%	34,00%		34,00%	17,68%	34,00%	23,13%	20,75%	34,00%	20,74%	34,00%	21,07%	19,38%	34,00%	22,43%	23,07%
Вишметарско II кл	3,96%	6,00%	3,72%	3,90%	6,00%		6,00%	3,12%	6,00%	4,06%	3,65%	6,00%	3,66%	6,00%	3,72%	3,42%	6,00%	3,96%	4,10%
<b>УКУПНО НЕТО</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>		<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>
<b>НЕТО</b>	<b>88,99%</b>	<b>87,74%</b>	<b>89,00%</b>	<b>89,01%</b>	<b>87,91%</b>		<b>88,59%</b>	<b>89,00%</b>	<b>88,27%</b>	<b>87,99%</b>	<b>89,00%</b>	<b>89,00%</b>	<b>89,00%</b>	<b>90,28%</b>	<b>89,02%</b>	<b>89,37%</b>	<b>88,44%</b>	<b>88,99%</b>	<b>89,07%</b>
<b>ОСТАТАК</b>	<b>11,01%</b>	<b>12,26%</b>	<b>11,00%</b>	<b>10,99%</b>	<b>12,09%</b>		<b>11,41%</b>	<b>11,00%</b>	<b>11,73%</b>	<b>12,01%</b>	<b>11,00%</b>	<b>11,00%</b>	<b>11,00%</b>	<b>9,72%</b>	<b>10,98%</b>	<b>10,63%</b>	<b>11,56%</b>	<b>11,01%</b>	<b>10,93%</b>
<b>БРУТО</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>		<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>

**Tabela 3.** Relativni odnosi sortimenata smrče u sastojinama koje je pogodio požar  
– pre pojave požara

Смрча	56b	57a	57b	35b
<b>Групци %</b>	<b>65,00%</b>	<b>62,82%</b>	<b>65,97%</b>	<b>62,01%</b>
F/1	0,71%		0,92%	0,68%
F/2	0,39%		0,46%	0,37%
F/3	0,06%		0,13%	0,12%
L/1	1,17%		0,73%	1,61%
L/2	0,39%		0,26%	0,81%
L/3	0,26%		0,07%	0,74%
I/1	12,35%	11,31%	11,22%	10,05%
I/2	7,15%	6,91%	6,60%	5,77%
I/3	3,25%	2,51%	3,96%	4,15%
II/1	9,10%	11,94%	9,90%	8,19%
II/2	6,56%	8,79%	7,52%	5,33%
II/3	4,55%	3,77%	3,96%	2,48%
III/1	9,10%	10,05%	9,90%	9,92%
III/2	5,85%	4,40%	5,94%	7,44%
III/3	4,09%	3,14%	4,42%	4,34%
<b>Огрев %</b>	<b>35,00%</b>	<b>37,18%</b>	<b>34,03%</b>	<b>37,99%</b>
I кл				
II кл				
Сеченица				
Вишметарско I кл	29,75%	31,73%	28,90%	32,31%
Вишметарско II кл	5,25%	5,45%	5,13%	5,68%
<b>УКУПНО НЕТО</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>
<b>НЕТО</b>	<b>85,01%</b>	<b>84,99%</b>	<b>85,03%</b>	<b>84,97%</b>
<b>ОСТАТАК</b>	<b>14,99%</b>	<b>15,01%</b>	<b>14,97%</b>	<b>15,03%</b>
<b>БРУТО</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>

**Tabela 4.** Relativni odnosi sortimenata **bukve** u sastojinama koje je pogodio požar  
– **posle** pojave požara

Буква	49a	49b	50a	51a	51b	51c	51d	52a	52b	53a	53b	54a	54b	54c	55a	56a	56b	57a	57b
<b>Трупци %</b>	30,04%		34,49%	31,15%				45,61%		28,27%	35,61%		35,59%		34,48%	39,92%		30,04%	27,74%
F/1																			
F/2																			
F/3																			
L/1																			
L/2																			
L/3																			
K/1																			
K/2																			
K/3																			
I/1	4,92%		5,39%	4,97%				4,10%		5,00%	5,38%		5,25%		5,31%	6,02%		4,88%	4,64%
I/2	2,92%		3,11%	2,25%				5,65%		3,88%	3,95%		3,17%		3,17%	3,33%		3,30%	3,26%
I/3	1,03%		2,77%	1,66%				2,87%		1,03%	1,26%		1,39%		1,84%	1,72%		1,56%	2,19%
II/1	3,94%		3,57%	5,36%				8,75%		4,97%	6,77%		5,69%		6,07%	7,65%		4,77%	4,75%
II/2	2,92%		5,18%	2,83%				6,08%		2,75%	3,82%		3,52%		2,60%	4,67%		3,11%	2,72%
II/3	3,30%		4,08%	2,64%				4,85%		1,17%	1,87%		2,17%		1,63%	2,22%		1,90%	1,09%
III/1	5,57%		5,60%	6,18%				7,04%		5,67%	4,08%		6,68%		7,51%	10,10%		5,22%	5,36%
III/2	4,43%		4,04%	3,77%				3,94%		2,47%	7,90%		4,34%		3,95%	3,28%		3,22%	2,40%
III/3	1,03%		0,74%	1,47%				2,34%		1,34%	0,57%		3,39%		2,41%	0,95%		2,09%	1,33%
<b>Огрев %</b>	69,96%	100,00%	65,51%	68,85%	100,00%		100,00%	54,39%	100,00%	71,73%	64,39%	100,00%	64,41%	100,00%	65,52%	60,08%	100,00%	69,96%	72,24%
I кл	36,58%	53,51%	34,31%	36,02%	53,57%		53,79%	28,64%	53,69%	37,37%	33,74%	53,93%	33,74%	54,34%	34,32%	31,57%	53,74%	36,59%	37,72%
II кл	5,74%	7,45%	5,34%	5,63%	7,42%		7,28%	4,34%	7,35%	5,98%	5,23%	7,20%	5,26%	6,94%	5,34%	4,84%	7,31%	5,74%	6,04%
Сеченица																			
Вишеметарско I кл	24,09%	34,87%	22,59%	23,73%	34,89%		34,97%	18,81%	34,93%	24,67%	22,22%	35,01%	22,20%	35,16%	22,58%	20,74%	34,95%	24,09%	24,81%
Вишеметарско II кл	3,54%	4,16%	3,27%	3,47%	4,12%		3,96%	2,60%	4,04%	3,70%	3,20%	3,86%	3,20%	3,56%	3,27%	2,92%	4,00%	3,54%	3,69%
<b>УКУПНО НЕТО</b>	100,00%	100,00%	100,00%	100,00%	100,00%		100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
<b>НЕТО</b>	80,00%	80,00%	80,00%	80,00%	80,00%	#DIV/0!	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%	80,00%
<b>ОСТАТАК</b>	20,00%	20,00%	20,00%	20,00%	20,00%	#DIV/0!	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%
<b>БРУТО</b>	100,00%	100,00%	100,00%	100,00%	100,00%	#DIV/0!	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

**Tabela 5.** Relativni odnosi sortimenata **smrče** u sastojinama koje je pogodio požar  
– **posle** pojave požara

Смрча	56b	57a	57b	35b
<b>Трупци %</b>	62,75%	60,29%	63,85%	59,37%
F/1				
F/2				
F/3				
L/1				
L/2				
L/3				
I/1	13,59%	11,60%	12,55%	10,95%
I/2	7,33%	6,62%	6,79%	5,75%
I/3	2,54%	1,64%	3,42%	3,64%
II/1	10,43%	12,32%	10,83%	9,89%
II/2	6,67%	8,76%	7,61%	5,75%
II/3	4,24%	3,06%	3,35%	2,44%
III/1	9,10%	10,18%	10,00%	10,03%
III/2	5,42%	3,77%	5,52%	7,22%
III/3	3,43%	2,35%	3,80%	3,71%
<b>Огрев %</b>	37,25%	39,71%	36,15%	40,63%
I кл				
II кл				
Сеченица				
Вишеметарско I кл	32,50%	34,75%	31,55%	35,40%
Вишеметарско II кл	4,74%	4,96%	4,60%	5,22%
<b>УКУПНО НЕТО</b>	100,00%	100,00%	100,00%	100,00%
<b>НЕТО</b>	75,00%	75,00%	75,00%	75,00%
<b>ОСТАТАК</b>	25,00%	25,00%	25,00%	25,00%
<b>БРУТО</b>	100,00%	100,00%	100,00%	100,00%

### 4.3. Utvrđivanje vrednosti zapremine pre i posle požara

Nakon utvrđenih relativnih udela sortimenata po vrstama drveća pre i posle požara utvrdila se i apsolutna vrednost drvene zapremine za svaku sastojinu i vrstu drveća posebno po tehničkim klasama. Zatim su se te vrednosti množile sa cenama drvnih sortimenata po važećem cenovniku Javnog preduzeća za gazdovanje šumama „Srbijašume“. Razlika vrednosti drvene zapremine pre pojave požara i vrednosti drvene zapremine posle požara predstavlja gubitak u vrednosti zapremine posle usled pojave požara. Po ovom modelu moguće je utvrditi i gubitke u vrednosti drvene zapremine usled oštećenja usled pojave drugih prirodnih hazarda (snega, ledene kiše, vetra, klizišta, poplave i dr.).

**Tabela 6.** Procena vrednosti štete na drvnim sortimentima koja je prouzrokovana požarom

Drvni sortiment	Svega				Razlika din
	Pre požara		Posle požara		
	m <sup>3</sup>	din	m <sup>3</sup>	din	
Bukva-trupac F/1	68	757.767			757.767
Bukva-trupac F/2	25	337.400			337.400
Bukva-trupac F/3	1	17.414			17.414
Bukva-trupac L/1	666	4.995.412			4.995.412
Bukva-trupac L/2	496	4.177.134			4.177.134
Bukva-trupac L/3	324	3.123.928			3.123.928
Bukva-trupac K/1	1.031	6.565.526			6.565.526
Bukva-trupac K/2	1.043	7.055.110			7.055.110
Bukva-trupac K/3	327	2.343.613			2.343.613
Bukva-trupac I/1	4.237	19.237.053	3.669	16.657.695	2.579.358
Bukva-trupac I/2	3.337	17.226.795	2.725	14.069.649	3.157.146
Bukva-trupac I/3	2.098	12.540.689	1.463	8.745.057	3.795.631
Bukva-trupac II/1	4.319	14.824.368	4.349	14.927.791	-103.423
Bukva-trupac II/2	3.250	12.808.873	3.110	12.255.832	553.041
Bukva-trupac II/3	2.652	12.213.791	2.340	10.777.150	1.436.641
Bukva-trupac III/1	4.252	10.975.470	4.647	11.994.536	-1.019.066
Bukva-trupac III/2	2.722	8.171.860	3.129	9.393.667	-1.221.807
Bukva-trupac III/3	1.447	5.142.818	1.138	4.045.225	1.097.593
Bukva-ogrev I kl	26.942	35.814.566	26.226	34.862.176	952.390
Bukva-ogrev II kl	4.755	1.775.204	4.039	1.507.739	267.465
Bukva višemetarsko I kl	17.962	43.714.598	17.245	41.970.926	1.743.672
Bukva višemetarsko II kl	3.168	4.681.753	2.452	3.623.006	1.058.747
Smrča-trupci F/1	50	591.041			591.041
Smrča-trupci F/2	27	337.496			337.496
Smrča-trupci F/3	6	79.372			79.372
Smrča-trupci L/1	69	644.627			644.627
Smrča-trupci L/2	25	249.240			249.240
Smrča-trupci L/3	15	166.307			166.307
Smrča-trupci I/1	803	5.867.022	780	5.703.153	163.869
Smrča-trupci I/2	468	3.708.329	422	3.342.748	365.581
Smrča-trupci I/3	237	2.033.095	170	1.457.989	575.107
Smrča-trupci II/1	638	3.748.179	635	3.726.964	21.215
Smrča-trupci II/2	466	2.978.978	418	2.672.066	306.911
Smrča-trupci II/3	286	1.984.149	228	1.584.763	399.386
Smrča-trupci III/1	641	2.937.876	568	2.604.361	333.515
Smrča-trupci III/2	402	2.016.329	329	1.651.473	364.856
Smrča-trupci III/3	283	1.549.150	210	1.150.700	398.451
Smrča višemetarsko I kl	2.022	2.206.973	1.949	2.127.604	79.369
Smrča višemetarsko II kl	357	145.827	284	116.124	29.703
<b>Ukupno</b>	<b>91.918</b>	<b>259.745.128</b>	<b>82.525</b>	<b>210.968.394</b>	<b>48.776.734</b>

Gubitak u vrednosti zapremine posle usled pojave požara – direktna šteta koje je izazvao požar na Staroj planini je procenjena na 48.776.734 dinara ili oko 416.895 eura.

Ekološke štete su najčešće višestruko veće od direktnih šteta. Metodika utvrđivanja ekoloških šteta nije još uvek u potpunosti definisana u domaćoj i inostarnoj šumarskoj naučnoj teoriji i praksi. U osnovi ekološke štete je potrebno vezivati za funkcije koje šume ispunjavaju na konkretnom lokalitetu gde se prirodna katastrofa desi. Za okvirnu procenu dovoljno je direktne štete pomnožiti sa faktorom koji se u aposlutnom iznosu kreće u rasponu od min. 5 do max. 10. U konkretnom slučaju primenjen je faktor 10.

Procenje ekološke štete koje je izazvao požar na Staroj planini su oko 487.767.734 dinara ili oko 4,16 milona eura.

## 5. ZAKLJUČAK

Utvrđivanje obima ekoloških i ekonomskih šteta koje izazovu šumski požari je veoma kompleksno i još uvek u nedovoljnoj meri naučno obrađeno. I ovaj požar je pokazao da su obimi ekoloških šteta u odnosu na ekonomske dominirajući.

Utvrđivanje razlika u vrednosti drvne zapremine pre pojave požara i vrednosti drvne zapremine posle požara predstavlja gubitak u vrednosti zapremine posle usled pojave požara. Po ovom modelu moguće je utvrditi i gubitke u vrednosti drvne zapremine usled oštećenja kod pojave drugih prirodnih katastrofa (snega, ledene kiše, vetra, klizišta, poplave i dr.). Ova metodika bi mogla u budućnosti da bude polaz pri utvrđivanju obima šteta u šumarskoj praksi kod izrade Sanacionih planova za otklanjanje ugroženosti i štetnih uticaja na šumske ekosisteme.

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# TRENDOVI U BIOMETRIJI: METODA AUTENTIFIKACIJE I PRIMJERI KORIŠTENJA U TURIZMU I HOTELIJERSTVU

## BIOMETRICS TRENDS: AUTHENTICATION AND USE CASES IN TOURISM AND HOSPITALITY INDUSTRY

Ljubica Pilepić Stifanich <sup>1</sup> 

DOI:

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**Sažetak:** Cilj ovoga rada je istražiti jednu relativno mladu tehnologiju, koja će po svim pokazateljima postati temelj svih sigurnosnih aplikacija u svijetu u budućnosti. Budući da živimo u brzorastućem, informacijskom i digitalnom dobu gdje se svakoga dana razvijaju nove tehnologije, prikazati će se i detaljno analizirati neke biometrijske metode i tehnike koje su danas u upotrebi s posebnim naglaskom na sektor turizma i hotelijerstva. Radi se o primjeni sustava za identifikaciju lica u turizmu s posebnim osvrtom na biometrijsku provjeru putnika u zračnim lukama, mogućnostima biometrijskog plaćanja otiskom prsta, efikasnijem upravljanju osobljem u području vođenja evidencije radnog vremena i kontroli pristupa. Biometrijska tehnologija tom sektoru nudi mogućnost da se izdigne iznad tradicionalnih koncepata u poboljšanju sigurnosti i cjelokupnog iskustva gostiju. Hoteli na taj način mogu poboljšati sustav upravljanja, a gostima se nudi najviši nivo komfora i pogodnosti. U radu se istražuju mogućnosti, snage i slabosti biometrije te utjecaj biometrije na čovjeka koji je u izravnoj interakciji s njom. Koliko su zapravo pouzdani biometrijski sustavi, štite li našu privatnost i ljudska prava samo su neka od pitanja na koja ovaj rad pokušava iznaći odgovore.

**Ključne riječi:** biometrija, autentifikacija, sigurnost, privatnost, turizam, hotelijerstvo.

**Abstract:** This paper aims to investigate in-depth a relatively young technology, one that by all indications is likely to become the basis of all security applications in the world in the future. As we live in a fast-growing information and digital age, where each day sees the development of new technologies, the paper also closely analyses some biometrical methods and techniques used today, with special emphasis on the tourism and hospitality sector. Explored is the application of facial recognition systems in tourism, with special reference to the biometric monitoring of travelers in airports, fingerprint-based biometric payment systems, and more effective personnel management with regard to recording working hours and access control. Biometrics technology enables the tourism and hospitality sector to rise above traditional concepts in improving the security and overall experiences of guests. In this way, hotels are able to improve their management systems while guests are provided with the highest levels of comfort and convenience. The paper explores the opportunities, strengths and weaknesses of biometrics together with the impact of this technology on people directly interacting with it. Just how reliable are biometric systems and do they protect our privacy and human rights are only some of the questions this paper seeks to answer.

**Keywords:** biometrics, authentication, security, privacy, tourism, hospitality.

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### 1. UVOD

Pored ostalih tehnologija današnjice, biometrijska tehnologija predstavlja vrlo važan čimbenik u turizmu i hotelijerstvu, omogućava nove sigurnije načine poslovanja. Iako brojne industrije mogu imati koristi od biometrije, putnička industrija već je uvelike investirala u pri-

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mjenu biometrije u svakodnevno poslovanje. Ovdje to može biti osobito korisno, jer se turističke tvrtke moraju nositi s velikim brojem putnika i kupaca, tako da je svaka tehnologija koja može pomoći ubrzati procese izuzetno korisna. Osim toga, u zračnim lukama i hotelima sigurnost je ključna, a biometrijska tehnologija može se koristiti za lakšu identifikaciju ljudi, za omogućavanje pristupa ljudima određenim mjestima i sl. Uz navedeno primjena ove tehnologije gotovo trenutno može poboljšati korisničko iskustvo većom personalizacijom (Revfine.com). Osim komercijalne svrhe, danas se biometrija sve više koristi i u privatne svrhe (Facebook, iPhone i sl.), za upravljanje identitetom. S ovom evolucijom biometrije, često se postavljaju pitanja o etičkoj upotrebi tehnologije (North-Samardzic, 2019).

Nekoliko studija prikazalo je (Mills, Meyers i Byun, 2010; Kim, Farrish i Schrier, 2013; Warren, 2010; Stankov, Filimonau i Slivar, 2019; Neo, Rasiah, Tong i Teo, 2014; Murphy i Rotter, 2009) biometriju kao “superiornu tehnologiju” jer tim sektorima nudi mogućnost da se izdignu iznad tradicionalnih koncepata u poboljšanju sigurnosti i cjelokupnog iskustva turista. Međutim, još uvijek postoji ograničeni broj istraživanja koja uključuju primjenu biometrijske tehnologije i njezine implikacije u tim sektorima. Stoga se smatra da je ovo istraživanje opravdano, jer pruža koristan pregled odgovarajuće literature iz područja biometrije u turističkoj i hotelijerskoj industriji i nastoji dati doprinos u pogledu sagledavanja svih mogućnosti, snaga i slabosti biometrije i utjecaja iste na samog čovjeka.

Svrha ovoga rada je definirati što biometrija zapravo jest i otkriti kako ona može biti od koristi ljudima u turizmu i hotelijerstvu. Ciljevi ovoga rada su istražiti na koji način biometrijska rješenja utječu na povećanje učinkovitosti poslovanja turističkih i hotelskih kompanija, a analizom slučajeva prikazati trenutno stanje razvoja i buduće trendove koji se očekuju u tom području.

Rad se sastoji od šest dijelova. Nakon uvoda, u drugom dijelu rada dan je pregled relevantne literature usko vezane uz područje istraživanja. U trećem dijelu neophodno je definirati sam pojam biometrije i objasniti osnovne biometrijske metode i tehnike. U četvrtom dijelu rada iznose se analize slučajeva najčešćih primjena biometrijskih tehnologija u turizmu i hotelijerstvu. Peti dio rada bavi se kontroverznom stranom biometrije i postavljaju se pitanja o etičkoj primjeni ove tehnologije. U posljednjem dijelu rada iznosi se rezime teorijskih i aplikativnih spoznaja do kojih se došlo istraživanjem.

## 2. PREGLED LITERATURE

Morosan (2016) navodi kako integracija biometrijske tehnologije s postojećom može pružiti vrhunske razine točnosti, sigurnosti i praktičnosti, čime se optimizira interakcija između putnika i putničkih organizacija, kao i hotelskih poduzeća i gostiju te postiže sinergija i osvarivanje važnih koristi za sve dionike ovih industrija. Prema Jainu, Rossu, Nandakumaru (2011) i Morosanu (2012), autentifikacija je vjerojatno superiorna u odnosu na ne-biometričke tehnologije jer se primjenjuje u većini upravljačkih zadataka i interakciji s turistima. Neki od primjera korištenja autentifikacije su u upravljanju transakcijama (turisti moraju potvrditi identitet prilikom ulaska u putnički sustav), pružanju usluga (samo ovlaštena osoba može pružiti uslugu u ime organizacije), postizanju sigurnosti sustava putovanja (sprečavanje neovlaštenog pristupa sigurnom području zračnih luka, kontrola ukrcanja u komercijalne zrakoplove, ulazak u nacionalne granice) i dr.

Kronološki pregled dosadašnjih istraživanja fokusiranih na razvoj i upotrebu biometrijskih sustava u turističkoj i hotelijerskoj industriji prikazan je tablicom 1.

**Tablica 1.** Pregled dosadašnjih istraživanja o primjeni biometrije u turizmu i hotelskoj industriji

<b>Autori (Godina)</b>	<b>Fokus istraživanja</b>
NorthSamardzic, A. (2019)	Etičke implikacije biometrije na organizaciju
Stankov, U., Filimonau, V. i Slivar, I. (2019)	Kritički pregled aplikacija i implikacija ICT-a u hotelima
Morosan, C. (2016)	Biometrijski sustavi u industriji putovanja: prilike i izazovi
Ko, C.-H. i Yu, C.-C. (2015)	Istraživanje percepcije zaposlenika o usvajanju biometrijske tehnologije u hotelima
Kim, J.S. i Bernhard, B. (2014)	<b>Čimbenici koji utječu na namjeru hotelskih gostiju da koriste sustav otiska prsta</b>
Neo, H.-F., Rasiah, D., Tong, D.Y.K. i Teo, C.-C. (2014)	Biometrijska tehnologija i privatnost: perspektiva iz zadovoljstva turista
Kim, J., Farrish, J. i Schrier, T. (2013)	Problem sigurnosti informacijske tehnologije u hotelima
Bilgihan, A., Karadag, E., Cobanoglu, C. i Okumus, F. (2013)	Primjena i trendovi biometrijske tehnologije u hotelima
Morosan, C. (2012)	Biometrijska rješenja za probleme sigurnosti u industriji putovanja
Jain, A.K., Ross, A.A. i Nandakumar, K. (2011)	Osnove biometrije – metode i tehnike
Mills, J., Meyers, M. i Byun, S. (2010)	Istraživanje održivih biometrijskih tehnologija u turizmu i ugostiteljstvu – prednosti i nedostaci
Murphy, H.C. i Rottet, D. (2009)	Biometrijska autentifikacija za hotelske procese
Kang, B., Brewer, K.P. i Bai, B. (2007)	Biometrija za hotelijerstvo i turizam – nova tehnološka dostignuća

**Izvor:** Izradio autor

Primjena tehnologije u hotelskoj industriji vođena je potrebom za poboljšanjem i usavršavanjem korisničke usluge (Kim i Bernhard, 2014), poboljšanjem operativne učinkovitosti (Bilgihan, Karadag, Cobanoglu i Okumus, 2013), povećanjem prihoda i smanjenjem ukupnih troškova (Kang, Brewer i Bai, 2007). Prema tome, hotelijerstvo je spremno usvojiti i ugraditi nove tehnologije i poboljšati postojeći poslovni proces. Povijest biometrije u hotelijerstvu je relativno kratka, ali općenito je prihvaćeno da biometrijski sustavi mogu dodati vrijednost hotelu i poboljšati iskustvo boravka gostiju (Murphy & Rottet, 2009). Bez obzira na potencijalne koristi koje ta tehnologija ima za ponuditi hotelijerstvu, percepcija o usvajanju tehnologije od strane zaposlenika ključni su čimbenik uspješne implementacije (Ko i Yu, 2015). Kim, Farrish i Schrier (2013) su našli kako hotelijeri jasno razumiju kako tehnologija može poboljšati korisničku uslugu i operativnu učinkovitost, ali još uvijek postoji nerazumijevanje prirode rizika koji je povezan s neadekvatnom upotrebom iste. Analiza i procjena sigurnosnog rizika i ulaganje u sigurnosne sustave postaje imperativ.

Mills, Meyers i Byun (2010) identificiraju potencijalne poslovne učinke biometrije, koji se očituju u povećanju zadovoljstva potrošača, operativnoj učinkovitosti i sigurnosti. Osim brojnih mogućnosti koje ova tehnologija pruža u poslovanju, Mills, i dr. (2010); Neo, i dr. (2014) kao osnovni nedostatak biometrije ističu problem privatnosti koji se javlja tijekom spremanja velike količine biometrijskih podataka o samoj osobi u procesu uspješne identifikacije. Stoga, turistič-

ke i hotelske kompanije trebaju imati jasne i strateški razrađene ciljeve primjene biometrijskih tehnologija u svoje poslovanje. One moraju biti svjesne bilo kakve povrede privatnosti, percepcije gostiju o tom problemu, stava prema povjerenju i dr. (NorthSamardzic, 2019). Osim toga, korporativna odgovornost i etička upotreba informacije dobivene iz biometrijskih podataka mogu utjecati na spremnost gosta da koristi ili ne koristi ovu tehnologiju.

Postoji nekoliko važnih karakteristika biometrijske tehnologije, koje doprinose njenom korištenju u hotelijerstvu, poput relativne lakoće upotrebe, brzina i pouzdanost, dugovječnost i pogodnost za mnoga okruženja. Ono što je najvažnije, biometrija ne zahtijeva upotrebu dodatnih uređaja. Biometrijski sustavi kontrole pristupa česta su sredstva uspostave sigurnosti hotelskih prostora te čine da se gosti osjećaju sigurnim tijekom boravka u hotelskom objektu. Stoga biometrija postupno postaje uobičajeno *in-room* tehnološko rješenje za hotele (Stankov, Filimonau i Slivar, 2019).

### 3. BIOMETRIJSKA AUTENTIFIKACIJA

Biometrija (engl. *Biometrics*) je znanost o automatiziranim postupcima za jedinstveno prepoznavanje ljudi na temelju tjelesnih ili ponašajnih osobina čovjeka koje se rijetko ili nikada ne mijenjaju. Dakle, biometrija se oslanja na ono “tko ste” i “što radite”, za razliku od onoga “što znate” (zaporka) ili “što imate” (osobna iskaznica), (Prabhakar, Pankanti i Jain, 2003, 33). Suvremena biometrijska autentifikacija zasniva se na upotrebi biometrijskih karakteristika čovjeka. Digitalna slika otisaka prstiju, očne rožnice ili DNA osobe unaprijed se memorira u sustav i kada netko zatraži pristup sustavu uspoređuje se njegova stvarna obilježja s onima unaprijed memoriranim (Warren, 2010; Radmilović, 2008). Biometrijska autentifikacija je dakle postupak usporedbe podataka o osobinama osobe s biometrijskim “predloškom” te osobe kako bi se utvrdila sličnost (Gemalto n.d.).

Literatura (Boban i Perišić, 2015; Uludag, Pankanti, Prabhakar i Jain, 2004; Zorkadis i Donos, 2004; Morosan, 2010; Wang i Yanushkevich, 2007; Jain, Nandakumar i Nagar, 2008) razlikuje dvije vrste biometrijske autorizacije: fiziološku i bihevioralnu. Fiziološka je manje kontrolirana od strane čovjeka (skeniranje otiska prsta ili šake, prepoznavanje lica, skeniranje šarenice oka, skeniranje mrežnice oka, skeniranje vena u dlanu, DNA identifikacija, geometrija dlana, skeniranje uha, nosa, dinamika mirisa, termogram tijela i lica i sl.). Bihevioralna je ona na koju čovjek može više utjecati (prepoznavanje glasa, prepoznavanje potpisa, dinamika tipkanja, dinamika hoda, i sl.). Osim navedenih vrsta biometrijskih autentifikacija, posebno mjesto zauzima multimodalna biometrijska autorizacija (CERT, 2006), koja podrazumijeva kombinaciju svih prethodno navedenih biometrijskih autentifikacija i tehnika. Danas se za provjeru i identifikaciju osoba primjenjuje kombinacija biometrijskih izvora, što povećava sigurnost i točnost implementiranih biometrijskih rješenja. Već nekoliko godina upotreba nekoliko biometrijskih značajki u kombinaciji, na primjer lica i šarenice ili šarenice i otisaka prstiju, omogućuje znatno smanjenje stope pogreške.

Neki od najpoznatijih svjetskih lidera u multi-biometrijskoj tehnologiji autentifikacije današnjice su: Aratek International, Tajvan (inovativni proizvodi koji nude module otiska prsta, skenere otiska prsta, biometrijske mobilne terminale i inteligentne terminale za prepoznavanje lica), (<https://www.aratek.co/>); BioID Technologies (tehnologija skeniranja šarenice oka, tehnologija skeniranja otiska prsta, čitači putovnica, širok spektar biometrijskih rješenja za upravljanje identitetom, poput osobnih iskaznica, registracije birača, i dr.; biometrijska rješenja koja



uglavnom koriste vladine i financijske institucije ali i privatna poduzeća), (<http://www.bioidinc.com/>); CMI Tech, USA (paket proizvoda CMITech nudi cijeli niz naprednih rješenja prepoznavanja irisa za globalno tržište sigurne identifikacije, nudi brzu, bezkontaktnu i *hands-free* provjeru identiteta za kontrolu pristupa), (<https://www.cmi-tech.com/>); Credence ID (prvi koji su razvili komercijalno uspješne multi-modalne biometrijske uređaje i primijenili ih u velikoj mjeri, tehnologije otiska prsta, šarenice i prepoznavanja lica, veliki međunarodni biometrijski projekti, uključujući vlade nekih država kao što su SAD, Indija, Saudijska Arabija, Indonezija i Pakistan), (<https://credenceid.com/>); Futronic technology, Hong Kong (cijeli niz hardverskih i softverskih proizvoda za prepoznavanje otisaka prstiju i za logičku i fizičku kontrolu pristupa, prijavu na računala i mreže, upravljanje identitetom i sl. (<https://www.futronic-tech.com/index.php>); HID Global (sustavi za upravljanje identitetom, proizvodi za otvaranje vrata, pristup digitalnoj mreži, personaliziranje usluga, provjeru transakcija, pronalaženje informacija, praćenje imovine i sl.), (<https://www.hidglobal.com/>); Innovatrics (tehnologija prepoznavanja otisaka prsta, prepoznavanje lica, skeniranje irisa i dr.), (<https://www.innovatrics.com/biometric-technology/>). Osim navedenih a prema TechSci Research (2017), svjetsko tržište biometrije kontroliraju i sljedeći glavni igrači i to 3M Cogent, Morpho, NEC, Fujitsu, HID Global, Suprema, Precise Biometrics, IrisGuard, Smartmatic, Cross Match, SecuGen, Nuance Communication, RCG Holdings, Hitachi, ZK Technology i dr.

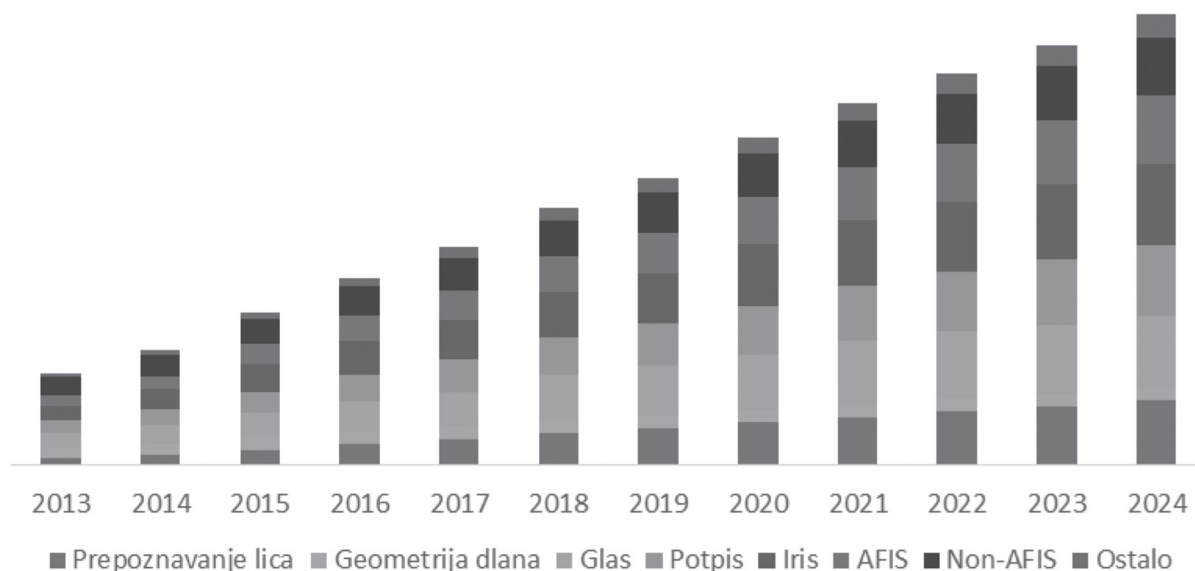
#### 4. BIOMETRIJA U TURIZMU I HOTELIJERSTVU – TREND OVI I IZAZ OVI

Globalno tržište biometrije iznosilo je 12,84 milijardi USD u 2016. godini, a predviđa se da će porasti za 14,76% prosječno godišnje i dostići 29,41 milijardu dolara do kraja 2022. godine (TechSci Research, 2017). U tom periodu predviđa se sve veća potražnja za naprednim sigurnosnim sustavima protiv prijevara, terorističkih aktivnosti, hakiranja i ostalih kriminalnih radnji u fizičkom i *cyber* svijetu. Ovaj porast može se prvenstveno zahvaliti utjecaju biometrijskih tehnologija u području bankarstva i financija gdje se ove tehnologije najviše koriste. Rastuće vladine inicijative kao što su e-putovnice i uvođenje drugih procesa e-uprave također će utjecati na porast ovog tržišta. Ali nisu za zanemariti ni ostali segmenti biometrijskog tržišta, kao što su trgovina, IT industrija, nacionalna sigurnost, zdravstvo, industrija putovanja, hotelska industrija, logistika, transport i dr., koja također bilježe znatan rast. Očekuje se da će sve intenzivnije uvođenje biometrijske tehnologije u IoT industriji pozitivno utjecati na globalno tržište biometrije tijekom prognoziranoga razdoblja.

Grafikon 17 prikazuje kretanje globalnog biometrijskog tržišta u periodu od 2013. do 2024. godine s obzirom na tehnologije biometrije (prepoznavanje lica, geometrija dlana, prepoznavanje glasa, prepoznavanje potpisa, skeniranje šarenice oka, skeniranje otiska prsta i ostalo).

Očekuje se da će tržišni udio sustava za kontrolu pristupa otiskom prsta svjedočiti znatnom rastu od preko 8% godišnje zahvaljujući činjenici da se može ugraditi u uređaje male veličine i niskih troškova (Global Market Insights, 2017). Štoviše, rast može biti svjedok visokog prihvatanja ove tehnologije u raznim aplikacijama poput onih za rezervaciju smještaja, ugostiteljskih usluga, prijevoza, hotelskim aplikacijama, zabavu i pristupa internetu jer sprečava lažnu prijavu. Očekuje se da će tržište izvan AFIS-a (engl. *Automated Fingerprint Identifikation*) također predstavljati značajan udio industrije u predviđenom vremenskom okviru zahvaljujući širokoj primjeni u području upravljanja osobljem, vođenja evidencije radnog vremena i bezgotovinskim transakcijama. Veliki prihod se pripisuje primjenama u javnim prostorima koji osiguravaju ulazak bez ključa i učinkovitu sigurnost. Očekuje se da će tržište prepoznavanja irisa imati dvo-

znamenasti rast od 2017. do 2024. godine (Lucintel, 2017). To se može pripisati integriranju skenera irisa u pametne telefone. Razni proizvođači pametnih telefona, uključujući LG i Samsung, usvojili su ovu tehniku kako bi poboljšali svoju sigurnost. Predviđa se da će prepoznavanje glasa porasti na preko 22% godišnje zahvaljujući širokoj upotrebi u mobilnom bankarstvu i raznim drugim aplikacijama u razvijenim zemljama sjeverne Amerike i zapadne Europe.



**Grafikon 1.** Rast globalnog biometrijskog tržišta prema tehnologijama (2013.- 2024.)

**Izvor:** Global Market Insights (2017)

U nastavku se navode neki od najčešćih načina i primjera upotrebe biometrijskih tehnologija u turizmu i hotelijerstvu.

Biometrijske putne isprave (e-putovnice). Preko 1,2 milijarde e-putovnica u prometu je 2020. godine. To znači da više od 1,2 milijarde putnika ima standardizirani digitalni portret u sigurnom dokumentu. Fotografija ubrzava prijelaz granice putnicima korištenjem skenera koji koristi princip prepoznavanja usporedbom lica ili otisaka prstiju (Gemalto, n.d.).

U putničkoj industriji mogu se koristiti četiri načina prepoznavanja lica (Revfine, n.d.): 1) Personalizacija usluga (npr. hoteli mogu ponuditi gostima mogućnost pružanja fotografije o sebi tijekom postupka rezervacije. Kad kamera u hotelu identificira njihovo lice po dolasku, osoblje hotela može ih tada prepoznati i pozvati ih po imenu te upotrijebiti podatke o rezervacijama kako bi osigurali da će dobiti uslugu koja je prilagođena njima. Može se koristiti i za identificiranje gostiju koji su boravili u hotelu ranije, omogućavajući im da budu nagrađeni za svoj ponovljeni dolazak, i sl.). 2) Sigurnost (prepoznavanja lica može biti od koristi turističkoj industriji kroz povećanu sigurnost i postoji niz potencijalnih primjena unutar ovog područja. Npr., prepoznavanje lica se može koristiti za provjeru identiteta gosta i ulazak u hotelsku sobu, pristup teretani ili drugom hotelskom sadržaju. Prepoznavanje lica može se koristiti za sprečavanje kriminalnih radnji ili za prepoznavanje problematičnih gostiju ili posjetitelja). 3) Analiza podataka (za hotele i poduzeća u turističkoj industriji, podaci igraju ključnu ulogu u omogućavanju pružanja izvrsne usluge i optimiziranju njihovih procesa. Ovo je područje na kojem će tehnologija prepoznavanja lica vjerojatno igrati kritičnu ulogu u narednih nekoliko godina, omogućujući automatsko prikupljanje nekih podataka gostiju. Tehnologija se također potencijalno može upotrijebiti za prepoznavanje spola osobe, za procjenu starosne dobi ili za prepoznavanje raspoloženja osobe.

To može pružiti pouzdane informacije o demografiji gostiju i načinu na koji reagiraju na različite lokacije i usluge, a tvrtke će to svakako iskoristiti sebi u korist. Primjer su AccorHotels koji koriste biometrijsko testiranje kako bi pokušali predvidjeti gdje njihovi gosti žele putovati prije nego što to sami znaju. Program nazvan “Seeker by LeClub AccorHotels” pokrenut je radi promicanja spajanja svoga programa lojalnosti, Le Club AccorHotels, s programima iz Raffle-sa, Swissotela i Fairmonda. Članovi loyalty-a mogu obaviti biometrijski test putem mobilnog uređaja ili desktop računala kako bi im pomogli da odrede kamo treba ići i koji hotel trebaju rezervirati. Testovi koriste web kameru uređaja za mjerenje broja otkucaja i pulsa korisnika radi određivanja osobnosti putovanja (Miley, 2018). 4) Plaćanja (prepoznavanja lica u funkciji brze i neprimjetne autorizacije plaćanja. MasterCard su već započeli eksperimentiranje sa sustavom “*selfie pay*”, gdje se plaćanja mogu potvrditi pomoću kamere na pametnom telefonu. U hotelima, ovo bi se moglo koristiti za obradu plaćanja nakon odlaska, potencijalno čak i bez potrebe za kontaktom sa osobljem hotela. Tehnologija se također može primijeniti u drugim područjima, kao što su restorani, dok hoteli, zrakoplovne tvrtke i druga turistička poduzeća mogu koristiti ovu tehnologiju za identifikaciju članova lojalty kluba i automatski primijeniti popuste na njihova konačna plaćanja, eliminirajući potrebu za karticama vjernosti ili kodovima za popust i sl. U mnogim hotelima u svijetu, kao npr. u Marriot hotelima u Kini, putnici mogu ostaviti svoje biometrijske podatke u mobilnim aplikacijama ili u kiosku u samom hotelu koji se kasnije koriste kao potvrda plaćanja (Travel Magazine, 2018).

Primjer integracije biometrijskih sustava i vrhunske tehnologije u hotelsko poslovanje predstavlja Alibabin hotel budućnosti “FlyZoo”, otvoren početkom 2019. godine u gradu Hangzhou u Kini. To je ultramoderni butik hotel sa 290 soba u kojem “tehnologija zadovoljava gostoprinstvo” (Bethany, 2019). Ovaj hotel je prvi takve vrste po tome što odustaje od tradicionalnih procesa prijave, a umjesto toga omogućuje gostima da upravljaju rezervacijama i obavljaju plaćanja u potpunosti putem mobilne aplikacije, prijavljuju se putem kioska za samoposluživanje i ulaze u liftove i svoje sobe pomoću tehnologije prepoznavanja lica. Uz to, hotelom gotovo u potpunosti upravljaju roboti koji po potrebi poslužuju toaletne i druge potrepštine.

Američka carinska i granična kontrola uvodi sustave za prepoznavanje lica na 20 najboljih zračnih luka u državi (Office of Inspector General, 2018). Sustavi su dizajnirani za provjeru identiteta putnika koji ulaze i izlaze iz zemlje. Nepotrebno je napomenuti da je za zračne luke i zrakoplovne tvrtke pružanje putnicima jedinstveno i ugodno iskustvo putovanja poslovni prioritet. Tehnologija prepoznavanja lica dopušta putnicima da dokažu svoj identitet na način da nakratko stanu pred kameru i uklone potrebu za dugotrajnim ukrcanjima na zrakoplov. Npr. zrakoplovna kompanija Delta uvela je sustav prepoznavanja lica za međunarodne putnike u međunarodnim zračnim lukama Hartsfield-Jackson Atlanta, Detroit, Orlando na Floridi i dr. (Davis, 2019). Danas više od stotinu zračnih luka širom svijeta koristi biometrijske čitače Clear, Vision-Box i drugih tvrtki za skeniranje putnika. U doba svjetske pandemije “COVID 19”, WTTC (The World Travel & Tourism Council) u svojem Izvješću o sigurnom putovanju u “novom normalnom” kontekstu poziva na biometrijsku i integriranu strategiju za podršku sigurnog zračnog putovanja u “novom normalnom” (Biometrics Research Group, 2020). WTTC je iznio sustavni pristup korištenju biometrijskih podataka za provjeru autentičnosti i identiteta putnika tijekom svih putovanja bez ručnih provjera, pametnim redovima čekanja i biometrijskim ukrcavanjem, beskontaktnim operacijama tijekom leta i elektroničkim carinskim obrascima.

Biometrija dolazi i do drugih aspekata industrije putovanja. Suvremena primjena multimodalnih biometrijskih rješenja u industriji iznajmljivanja vozila dovodi do potpunog automatizira-

nog upravljanja vozilima (Bluebird, 2019). Putnici koji dolaze na aerodrom koriste terminal za iznajmljivanje automobila kako bi im se skenirala lica i ubrzao proces rezervacije. Sustav omogućuje kontrolirani pristup vozilu i bilježenje svih relevantnih informacija o vozilu i putovanjima potrebnih za naplatu, statistiku i upravljanje voznim parkom. Rent-a-car agencija Hertz, među prvim na svijetu uvodi prepoznavanje lica i pregled otisaka prstiju na četrdesetak aerodroma širom svijeta. Hertz kaže da će ova tehnologija omogućiti turistima da uzmu automobil i izađu iz mjesta za najam za samo 30 sekundi (Lippe-McGraw, 2018).

## 5. KONTROVERZNA STRANA BIOMETRIJE

Primjena biometrijskih tehnologija potiče niz etičkih pitanja, uglavnom usredotočenih na pojam privatnosti (Alterman 2003, 140). Pons (2008) nalazi otpor korisnika prema upotrebi takve tehnologije, jer ju oni percipiraju kao sredstvo za potencijalno kršenje njihove privatnosti. Mnogi smatraju da je tehnologija i prikupljanje biometrijskih podataka općenito pretjerano nametljivo, a neki su veoma nepovjerljivi prema tvrtkama koje prikupljaju i pohranjuju toliko podataka o njima samima (Pai, Wang, Chen i Cai, 2018; Pranić, Roehl i West, 2009; Langenderfer i Linnhoff, 2005; Jones, 2007). Osim što tvrtke previše znaju o nama, postoji i velika zabrinutost zbog dijeljenja podataka s trećim stranama. Čim biometrijski podaci budu u rukama treće strane, postoji rizik da se takvi podaci mogu upotrijebiti u svrhe drugačije od onih na koje je dotična osoba dala svoj pristanak.

Rizici za sigurnost i privatnost povećat će se kako ljudi nastavljaju davati biometrijske podatke na sve više platformi i pružatelja usluga. Biometrijske podatke lako je hakirati, a posljedice zlouporabe mogu biti nevjerojatno opasne. Pristupom biometrijskim podacima hakeri mogu lako ukrasti nečiji identitet ili čak koristiti i mijenjati privatne podatke. Sigurnosna pitanja koja se odnose na biometrijske podatke usredotočena su na to kako se osjetljive informacije snimaju, čuvaju, obrađuju, prenose i kako se njima pristupa (Porr, 2019). Današnji pametni telefoni, tableti i kamere snimaju neke biometrijske podatke i pohranjuju ih čak i ako se ne koriste za autentifikaciju ili autorizaciju. Virtualni asistenti na uređajima pohranjuju vaše jedinstvene uzorke glasa i obrađuju ih u oblaku (Das i dr. 2018). CCTV kamere koje se koriste za praćenje pojedinaca pomoću tehnologije prepoznavanja lica izazivaju ozbiljnu zabrinutost zbog nejasnih granica između sigurnosti i nadzora. Jedan takav incident dogodio se 2015. godine kada je hakiran američki Ured – *Office of Personnel Management* (Haber, 2019). Cyber kriminalci došli su u posjed otisaka prstiju 5,6 milijuna vladinih službenika. U novije vrijeme, Rotemov i Locarov Izvještaj o sigurnosti iz tvrtke Vpnmentor objavljen u kolovozu 2019. godine otkriva veliku krađu u biometrijskom sustavu koji koristi britanska policija, banke i vojska. Izvještaj kaže kako su u javno dostupnoj bazi podataka pronađeni zapisi o prepoznavanju lica, otisci prstiju i ostali osobni podaci preko milijun ljudi (Rotem i Locar, 2019).

Ono na što treba odgovoriti je nedostatak nadzora i sigurnosti da bi biometrijski podaci dobiveni naprednom tehnologijom provjere autentičnosti bili sigurni. Rješenje leži u disciplini da se ostvari veća kontrola nad načinom pristupa i korištenju osobnih podataka. Ulaganja moraju biti u edukaciji ljudi i organizacija o tome kako se njihovi biometrijski podaci obrađuju i pohranjuju. Poduzeća također moraju povećati ulaganja u IT sigurnosna rješenja koja mogu učiniti identitet korisnika nerazumljivim tijekom prikupljanja podataka, čineći biometrijski sustav sigurnijim i učinkovitijim. Budući da sve više dionika prepoznaje ogroman potencijal biometrijske tehnologije, mnoge zemlje na globalnoj razini kreću u primjenu propisa koji će pridonjeti biometrijskoj sigurnosti i zaštiti prava ljudi na privatnost. U Europi se primjenjuje Opća Uredba o zaštiti

osobnih podataka – GDPR, koja predstavlja značajan iskorak u zaštiti biometrijskih podataka i privatnosti a odnosi se na sve države članice EU i na Veliku Britaniju, dok u Sjedinjenim Američkim Državama ne postoji jedinstven, sveobuhvatan savezni zakon koji bi regulirao prikupljanje i upotrebu biometrijskih podataka.

## 6. ZAKLJUČAK

Biometrija pruža pozitivno jamstvo identiteta raznim izazovima sigurne identifikacije. PIN-ovi, zaporke, osobne karte, sigurni tokeni i druge tehnologije više ne pružaju dovoljnu sigurnost u sprečavanju prijevара i upravljanju identitetom (Heracleous i Wirtz, 2006). Fiziološke i ponašajne karakteristike čovjeka postaju temelj za otkrivanje njegovog identiteta, a biometrija se danas sve češće koristi kao oblik autentifikacije u svim područjima života (Akinuwesi, Uzoka, Okwundu i Fashoto, 2016).

Tržište biometrije imat će opipljiv učinak na budućnost turističkih i hotelskih aplikacija, pružajući sigurnost, točnost i pravovremenost u prepoznavanju putnika, ubrzavajući proces rezervacija. Budućnost bez putovnica možda je izmišljena priča, ali ideja da putnici neće morati dokazivati identitet na tradicionalni način pri sljedećem odmoru nije tako daleka. Ali ako se trendovi na putovanjima nastave onako kako se očekuje, putnici će jednoga dana moći uskočiti u taksu do aerodroma, prošetati se po zračnoj luci, pozdraviti se na ulasku u zrakoplov, a sve to ne izvlačeći niti jedan oblik identifikacije. I to je doista odmor (Taner, 2019).

Ovaj rad iznosi pregled inovacija u području biometrijske tehnologije i želi potaknuti na razmišljanja o tome što pouzdana multimodalna biometrijska rješenja koja koriste tehnologiju prepoznavanja otisaka prstiju, lica, šarenice oka i sl. mogu donjeti turizmu i hotelskoj industriji u budućnosti. Doprinos ovoga rada je u razumijevanju biometrije i važnosti primjene ove tehnologije u turizmu i hotelijerstvu koja se očituje u brojnim koristima, počevši od smanjenja troškova, poboljšane funkcionalnosti, veće produktivnosti i povećanog zadovoljstva gostiju. Također, ova studija pruža smislene nove dimenzije važnih značajki i usluga temeljenih na biometriji i može poslužiti kao osnova za daljnja istraživanja u ovom području. Rezultati pokazuju da biometrija u turizmu i ugostiteljstvu ima ogroman potencijal. Nove tehnologije prepoznavanja lica i autentičnih usluga utječu na turiste, stvarajući novu generaciju putnika i hotelskih gostiju, pružajući uslugu “po mjeri”. S druge strane, hotelskom menadžmentu osiguravaju transparentnije poslovanje u pogledu sigurnosti i učinkovitijeg upravljanja. Predstavljena su najrelevantnija područja primjene u turizmu i hotelijerstvu. Međutim, također je potrebno istaknuti određene prepreke i izazove u procesu primjene biometrije, poput nepovjerenja prema ovoj tehnologiji od strane korisnika i problem privatnosti. Kako bi se pripremili za ono što dolazi, menadžeri hotela i zaposlenici u turizmu trebaju biti spremni usvojiti nove tehnologije kako bi se poboljšala učinkovitost i djelotvornost različitih radnih procesa. Vjerujemo da će ovaj rad biti koristan istraživačima i praktičarima na tom polju, pomoći im da razumiju ogroman potencijal biometrije, posebno u turizmu i hotelijerstvu.

Biometrija može s vremenom postati sveobuhvatna tehnologija, optimizirajući cijelo putovanje. I za kraj, zamislite svijet u kojem osoba može koristiti svoje lice kako bi ubrzala uslugu i pristupila kamo god želi.

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# VAŽNOST KVALITETE PERFORMANSI HOTELSKIH WEB STRANICA ZA GENERIRANJE BOLJE VIDLJIVOSTI U OKVIRU INTERNET PRETRAŽIVAČA

## THE IMPORTANCE OF HOTEL'S WEBSITE PERFORMANCE FOR GENERATING HIGHER SEARCH ENGINE VISIBILITY

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DOI:

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**Sažetak:** Za veliki broj potencijalnih gostiju nekoga hotela u svijetu upotreba tražilica (Google, Baidu, Yandex... ovisno o zemljopisnom položaju) još uvijek je uobičajena svakodnevna rutina u fazi prikupljanja informacija o smještaju. Jedan od glavnih ciljeva web stranica svakog hotela je privući više gostiju od pretraživača – iz tog razloga važno je postići bolju vidljivost u okviru Internet tražilica. Bolja vidljivost podrazumijeva višu poziciju u okviru stranica rezultata pretraživanja (SERP- Search Engine Result Pages). Zbog svakodnevnog eksponencijalnog povećanja sadržaja na Internetu / širom svijeta, često je teško postići dobru vidljivost tražilice ili osigurati čelnu poziciju na stranicama rezultata algoritamskih/ organskih pretraživanja. Dakle, *svrha* pisanja ovog rada proizlazi iz sve složenijeg utjecaja i važnosti algoritama tražilice, umjetne inteligencije i strojnog učenja na vidljivost u okviru Internet tražilica.

**Dizajn / metodologija / pristup** - Na temelju prethodne / dostupne literature empirijsko je istraživanje provedeno pomoću jednog od najboljih svjetskih “all in one” softvera za analizu optimizacije na tražilicama - SEMrush.

**Rezultati istraživanja** pokazuju (1) da je „vidljivosti na google tražilice” (položaj unutar SERP-a) ovisna o performansama web stranica hotela, te ukazuju (2) da je moguće detektirati i unaprijediti čimbenike koji determiniraju performanse web stranica hotela, a time i vidljivost na Internet tražilici.

**Ograničenja istraživanja** odnose se na određeni uzorak istraživanja (hoteli s pet zvjezdica u Hrvatskoj) i faktor kratkog vremena pri provođenju istraživanja.

U okviru **budućih istraživanja** trebala bi (1) povećati uzorak istraživanja i (2) istraživački proces treba proširiti i u kontekstu vremena i u kontekstu količine promatranih varijabli kako bi se pratile promjene u radu web stranica kroz duže vremensko razdoblje. Na taj bi se način višedimenzionalnom metrikom osiguralo kvalitetnije utvrđivanje međuovisnosti pojedinih varijabli i omogućilo donošenje relevantnijih zaključaka.

**U praksi**, rezultati istraživanja predstavljaju vrlo realne smjernice za primjenu u svakodnevnom poslovanju.

**Ključne riječi:** vidljivost/pozicija Internet tražilice - (SERP), faktori google algoritma, web stranica hotela, performanse, optimizacija.

**Abstract:** For the big number of potential hotel guests the use of search engines (Google, Baidu, Yandex... depending on geographical location) is still usual daily routine when they are in the process of collecting accommodation information. One of the main goals of each hotel's web site is to attract more guests from search engine searchers – that's why achievement of higher search engine visibility is important. Due to the daily exponential increase of content on Internet / world wide web, it often becomes difficult to achieve good search engine visibility or to secure a top position within SERP - Search Engine Result Pages. So, the **purpose** of writing this paper is derived from an increasingly complex influence and importance of search engine algorithms, artificial intelligence and machine learning on search engine visibility.

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**Design/Methodology/Approach** – Based on previous/available literature the empirical research was realized using SEMrush software.

**Research findings** indicate (1) that «search engine visibility» (position within SERP) is dependent on the performance of the hotel's web site, (2) that is possible to detect and improve the factors that determine the performance of the hotel web site and improve the search engine visibility.

**The limitations of the research** relate to a specific sample of research (five-star hotels in Croatia) and a short time factor when conducting research.

**Future research** should certainly (1) increase the research sample and (2) the research process should be extended in order to monitor web site performance changes over a longer period of time.

**In practical terms** the research results represent guidelines for application in business.

**Keywords:** search engine visibility – SERP - (Search Engine Result Pages), google algorithm factors, hotel website, performance.

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## 1. UVOD

Kada govorimo o poslovanju hotela jasno je da je krajnji smisao poslovanja prihod odnosno dobit. Na dobit utječe mnogo direktnih i indirektnih faktora. Općenito govoreći neki od faktora o kojima ovisi poslovanje podložni su utjecaju informacijsko komunikacijske tehnologije dok neki nisu. Hotelijsništvo kao gospodarska grana vrlo je kompleksno. U hotelima kao poslovnim sustavima cijelokupan proces od planiranja poslovanja i prodaje do realizacije prodaje sastoji se od vrlo velikog broja podprocesa i varijabli koje na prodajne procese i podprocese ovisno o tipu i veličini hotela utječu (raspodjela kapaciteta prema kanalima prodaje, planiranje i dinamika/paritet cijena, kvaliteta smještajnih objekata i smještajnih jedinica, analiza konkurencije, itd). Poslovni procesi u turizmu i hotelijsničtvu uglavnom su vrlo intenzivno osjetljivi i uvjetovani razvojem informacijsko komunikacijske tehnologije. S obzirom na razvoj tehnologije mijenjaju se i poslovne politike glede načina primjene tehnologije u poslovanju.

U ovome radu fokus istraživanja je većim djelom usmjeren na prodajne procese i promatranje on line poslovnih procesa determiniranih razvojem suvremene tehnologije. On line prodaja, općenito o hotelijsničtvu, vrlo je širok pojam koji se može promatrati sa različitih aspekata i istraživati različitim metodama i pristupima. Kao što je i u sažetku rada već izdvojeno za veliki broj potencijalnih gostiju nekoga hotela u svijetu, upotreba tražilica (Google, Baidu, Yandex... ovisno o zemljopisnom položaju) još uvijek je uobičajena svakodnevna rutina u fazi prikupljanja informacije/a o smještaju. U isto vrijeme interes svakoga hotela u svijetu jest ostvariti što veću prosječnu popunjenost hotela, uz što bolju cijenu istovremeno pokušavajući što veći broj online rezervacija ostvariti putem direktnog kanala prodaje (Šimunić, M., 2019). Dakle, respektirajući važnost i nezamjenjivost OTA kanala prodaje u ovom je radu naglasak na direktnim kanalima online rezervacija/prodaje u okviru rezervacijskih sustava, a u okviru web stranica hotela (ili putem redirekcija). Nadalje, broj on line rezervacija/prodaje hotela uvelike je ovisan o broju posjetitelja web stranica određenog hotela. Broj posjetitelja web stranica određenog hotela ovisan je o kvaliteti hotelskih web stranica. Kvaliteta hotelskih web stranica mjeri se različitim metodama, pristupima i na temelju analize velikog broja parametara (o čemu detaljno pišu Anusha, R. 2014., Jiujiu, 2018., Low, R. 2019.). Pojam kvalitet vrlo je važan budući na njemu počiva pozicija u okviru rezultata pretraživanja korisnika na Internet tražilicama. Algoritmi tražilica vrlo sofisticirano ponderiranim pristupom “tretiraju” web stranice u okviru *web site-a* te na temelju rezultata analize dodjeljuju *web site-u* adekvatnu poziciju unutar rezultata pretraživanja Internet tražilice (SERP – Search Engine Result Pages). Pozicija u okviru

tražilice naziva se vidljivost algoritamskih/organskih pretraživanja u okviru rezultata pretraživanja na Internet tražilici. Zbog svakodnevnog eksponencijalnog povećanja sadržaja na Internetu često i nije tako jednostavno postići dobru vidljivost tražilice ili osigurati čelnu poziciju na stranicama rezultata algoritamskih/organskih pretraživanja. Upravo je spomenuta vidljivost presudna determinanta o kojoj ovisi broj posjetitelja web stranica. Zadovoljavajući broj posjetitelja web stranica hotela preduvjet je za ostvarivanja zadovoljavajućeg broja ostvarenih rezervacija/prodanih usluga putem online direktnog kanala prodaje (konverzija “lookera u bookere”). Stoga je izrazito važno kvalitetno optimizirati sve elemente web stranica koje utječu na performanse/kvalitetu istih što je pak preduvjet za postizanje bolje vidljivosti/pozicije u okviru rezultata pretraživanja na Internet tražilici.

Google se npr. kroz svoju povijest koristio raznim algoritmima kako bi odredio kako *web site-ovi* / web stranice trebaju biti rangirani u rezultatima pretraživanja. PageRank, nazvan po suosnivaču Googlea Larryju Page, prvi je algoritam tvrtke. Razvili su ga 1996. Larry Page i njegov suosnivač Sergey Brin, dok su bili studenti na Sveučilištu Stanford, oslanjali se na broj kvalitete veza koje su upućivale na web stranicu (popularnost veze) kao mjerilo važnosti web stranice. Što je web stranica važnija, to će biti bolje rangirana. Od uvođenja PageRank-a, Google je nastavio uvoditi/razvijati nove algoritme (s imenima tematskim za životinje), npr. Google Panda (2011), Google Penguin (2012), Google Hummingbird (2013), Google RankBrain (2015), Bert (2019) s ciljem da kontinuirano poboljšava kvalitetu izlistavanja rezultata pretraživanja smanjujući webspam i sprječavajući manipulatore da se „igraju“ sustavom kroz taktike poput kupovine povratnih veza, punjenja njihovih web stranica ključnim riječima itd.

Poznato je da google danas u svom algoritmu koristi preko 200 faktora za determiniranje pozicije u okviru organskih/algoritamskih pretraživanja. (od kojih mnoge direktno ni ne otkriva, već daje smjernice za njihovu optimizaciju) o čemu će kasnije biti riječi.

## 2. HIPOTEZE RADA

U nastavku se navode hipoteze rada. Dokazivanje ili odbacivanje postavljenih hipoteza temelji se na zaključcima koji proizlaze iz činjenica dobivenih interpretacijom rezultata teorijskog istraživanja putema analize dostupne literature te empirijskog istraživanja putem provedenih testiranja/tretiranja web stranica hotela sa 5 zvjezdica na području RH.

U provedenom istraživanju postavljene su 2 temeljne hipoteze:

**H1:** Vidljivost na google Internet tražilici (položaj unutar rezultata pretraživanja – SERP – Search Engine Result Pages) ovisna je o performansama web stranica čija kvaliteta je u velikoj mjeri determinirana kvalitetom optimizacije google-ovih faktora za rangiranje.

**H2:** Na vidljivost u okviru Internet tražilica (koja je intenzivno je ovisna o performansama web site-a hotela) može se utjecati pravilnom detekcijom i optimizacijom google faktora za rangiranje.

## 3. PREGLED LITERATURE (TEORIJSKA POZADINA)

Za poziciju *web site-a* / web stranica u okviru organskih/algoritamskih rezultata pretraživanja odgovoran je google algoritam. Google u svom algoritmu koristi više od 200 faktora za rangiranje. Postavlja se često pitanje koji su to točno faktori i “kako oni rade”? Postoje mnogo izvora

koji se bave istraživanjem faktora za rangiranje. Neki su dokazani. Neki su kontroverzni. Neki predstavljaju špekulacije. Za razumijevanje cijele problematike koje je direktno ili indirektno vezana za funkcioniranje google algoritma vrlo je važno koristiti autentične i vjerodostojne izvore koji se bave istraživanjem google faktora za rangiranje (Robinson, J. 2019).

Google algoritam tajna je formula za koju google na objavljuje kako funkcionira, ali ukazuje na elemente od kojih se sastoji davajući smjernice za optimizaciju elemenata koji ga čine. Uglavnom, kada se proučava problematika google algoritma i google faktora za rangiranje u okviru Internet tražilica najbolje je koristiti slijedeća 3 izvora (pojedinačno nesavršena), budući su dokazani kao najautentičniji:

1. Patenti kao dobri izvori,
2. Izjave Google-a i njihovih timova kao bolji izvori, te
3. Studije koje primjenjuju znanstvene metode kao najbolji izvori.

Mnogi profesionalci koji se bave optimizacijom za tražilice (SEO - Search Engine Optimization) konstantno proučavaju sve te izvore, vrše razne simulacije kako bi došli do što egzaktnijih zaključaka glede stvarnog utjecaja određenih google faktora za rangiranje na kvalitetu/performance web stranica kojima je pak posljedično pozicija u okviru rezultata pretraživanja na Internet tražilici određena (Robinson, J. 2019).

U nastavku (tablica 1) prikazan je pregled literature koja je korištena u teorijskom dijelu istraživanja i koja je najviše utjecala na pisanje ovoga rada i dokazivanje H1 hipoteze i to:

**Tablica 1:** Pregled glavne literature od utjecaja za pisanje ovoga rada

Autor	Naslov	Godina
Killoran, J.B.	How to use search engine optimization techniques to increase website visibility.	2013.
Anusha, R.	A Study of Web Site Quality Models	2014.
Pan, B.	The power of search engine ranking for tourist destinations	2015.
Dukić, B., Gale, V.	Upravljanje odnosima s potrošačima u funkciji zadržavanja potrošača	2015.
Gupta, S.; Rakesh, N.; Thakral, A.; Chaudhary, D.K.	Search engine optimization: Success factors	2016.
Dean, B.	We Analyzed 1 Million Google Search Results. Here's What We Learned about SEO	2016.
Fishkin, R.	How to Rank in 2018: The SEO Checklist 2017.	2017.
Krrabaj, S.; Baxhaku, F.; Sadrijaj, D	Investigating search engine optimization techniques for effective ranking: A case study of an educational site	2017.
Jiujiu, GOOGLE.	Exploration on Web Testing of Web Site	2018.
Law, Rob	Evaluation of hotel websites: Progress and future developments	2019.
Vyas, C.	Evaluating state tourism websites using Search Engine Optimization tools	2019.
Robinson, J.	5 Top Resources for Google Ranking Factors	2019
Dean, B.	Google's 200 ranking factors: The complete list (2020), Backlink	2020.
Nada, A	10 most Decisive Google (SEO) Ranking Factors in 2020	2020
Doron, GOOGLE.	Top 10 Google Ranking Factors for 2020	2020.
Mohsin, M.	10 Google Search Statistics You need to know in 2020 [Infographic]	2020.
Hallebeek, GOOGLE.	A brief history of Google's algorithm update	2020.

Izvor: Autor

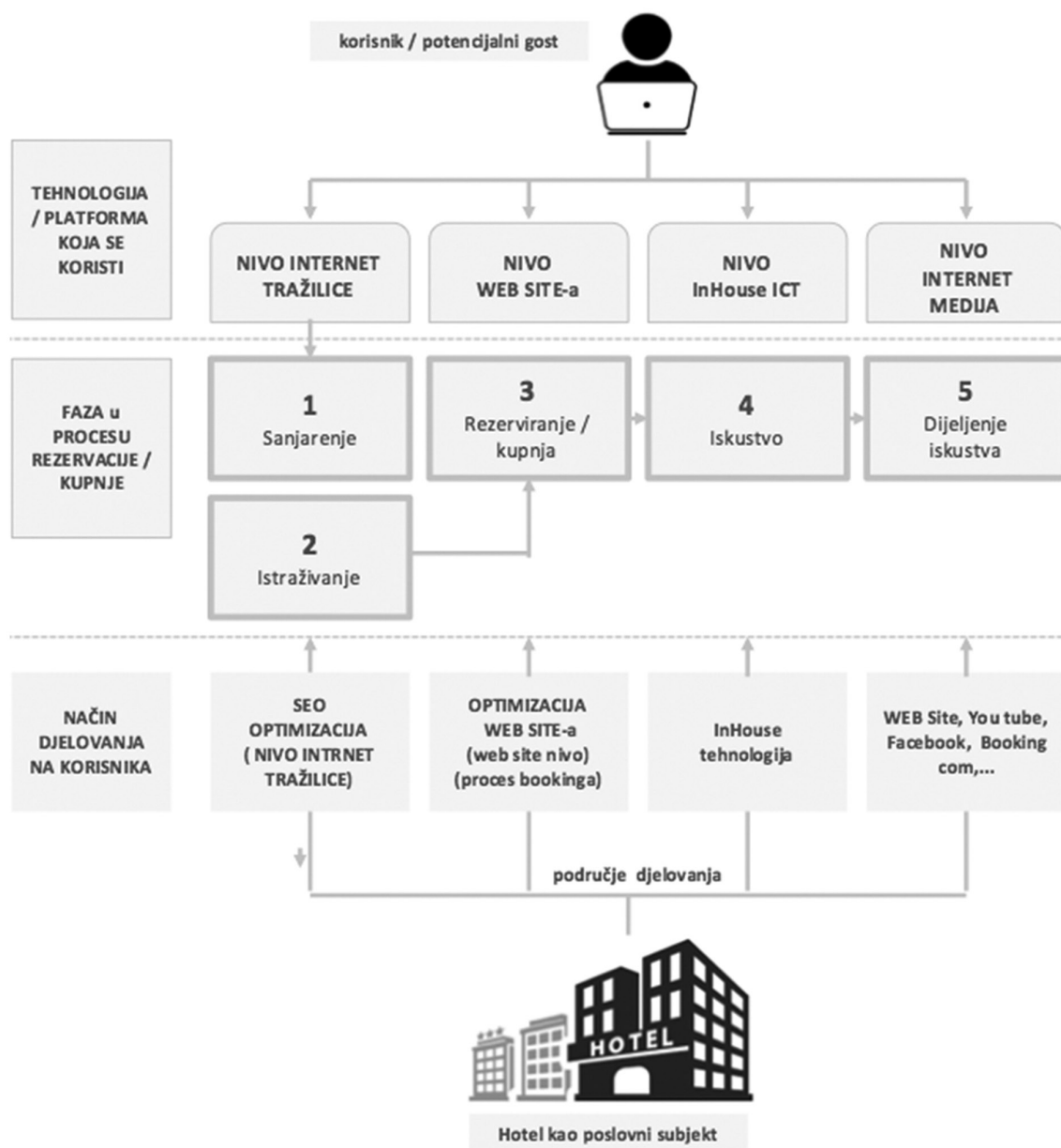
#### 4. PROCES ONLINE BOOKINGA GOSTA

Kako bi se što bolje shvatila važnost (1) pozicije web stranica u okviru rezultata pretraživanja na Internet tražilicama i (2) elemenata koji tu poziciju determiniraju potrebno je jasno razumijeti cijeli proces on line bookinga koji je kompleksan i trebao bi se uvijek promatrati (A) s aspekta korisnika/potencijalnog gosta i (B) s aspekta hotela kao poslovnog sustava. Taj proces najčešće se dijeli slijedeće faze: (1) Sanjarenje, (2) Istraživanje, (3) Rezerviranje, (4) Iskustvo, (5) Dijeljenje. Svaki korisnik kao potencijalni gost na početku procesa i kao gost određenog hotela na kraju procesa prolazi najčešće kroz svih pet faza. U svakoj od tih faza određena vrsta informacijske tehnologije dolazi do izražaja. U fazama sanjarenja i istraživanja Internet korisnik kao potencijalni gost nekoga hotela uglavnom skuplja informacije pretražujući Internet **upisivanjem njemu jedinstvenih fraza i izraza** kako bi pronašao informaciju (o hotelu, destinaciji, itd.) koju želi. U te prve dvije faze korisnik dominantno koristi Internet tražilice postavljanjem upita pretraživanja. Google koristi sofisticirani sustav **umjetne inteligencije** kako bi pomogao obraditi rezultate pretraživanja. Taj se sistem naziva **RankBrain** i samo je dio google-ovog algoritma za pretraživanje.

Organski popisi stranica sa rezultatima pretraživanja prirodni su popisi generirani na tražilicama na temelju niza mjernih podataka koji određuju njihovu relevantnost za traženi pojam. **Web stranice koje imaju dobru ocjenu na algoritamskom ispitnom programu algoritma tražilice biti će na boljoj poziciji pretraživača.** Stoga je za svaki hotel vrlo važno optimizirati elemente koji determiniraju kvalitetu web stranica kako bi isti bio što relevantniji za što veći broj korisnika Interneta koji su u fazi sanjarenja i istraživanja, a pretražuju ono što hotel nudi. Treća faza procesa online bookinga gosta odnosi se sam proces bookinga i odvija se “lokalno” u okviru *web site-a*. U toj su fazi za odluku o rezervaciji ili kupnji važni drugi faktori kao što su funkcionalnost, pouzdanost, učinkovitost, iskoristivost/korištenje, pokretnost *web site-a*, (Anusha, R. 2014) i predmet su posebnih analiza. U četvrtoj fazi koja se temelji na doživljavanju iskustva fokus je na korištenju i lokalnih software-a i Internet/društvenih medija putem kojih se ta iskustva istovremeno i doživljavaju i često u realnom vremenu i objavljuju. Na četvrtu fazu nastavlja se i peta faza koja se pak odnosi samo na dijeljenje iskustva prema “post festum” principu.

Upravo kroz detektiranje kanala, alata, resursa, tehnologije koje korisnik koristi u prikazanim fazama procesa online bookinga i kroz koje prolazi fokus treba staviti na analiziranje istih u svrhu stjecanja najtočnijih spoznaja sa ciljem njihove kasnije optimizacije.

Slijedeća slika (slika 1) prikazuje proces online bookinga gosta promatran sa aspekta korisnika kao potencijalnog gosta i s aspekta hotela kao poslovnog sustava. Proces treba promatrati s obe strane. Na taj način dolazi se do spoznaja koje su aktivnosti i kojim intenzitetom korisnici koriste tehnologiju u pojedinim fazama procesa s jedne strane, dok je sa druge strane važno ustanoviti kako i kojim intenzitetom se može prilagoditi i utjecati na tehnologiju odnosno posljedično preko nje na korisnika sa svrhom maksimiziranja pozitivnih djelovanja na on line prodajne procese hotela u širem smislu (povećanje vidljivosti web stranica hotela na google tražilici, povećanje broja korisnika na *web site-u*, povećanje konverzija na *web site-u*, poboljšanje/unaprijeđenje UI (User Interface) i UX (User experience) korisničkog sučelja i korisničkog iskustva u okviru *web site-a*, te “osiguravanja” dobrih komentara/recenzija.)



Slika 1. Proces online bookinga gosta hotela

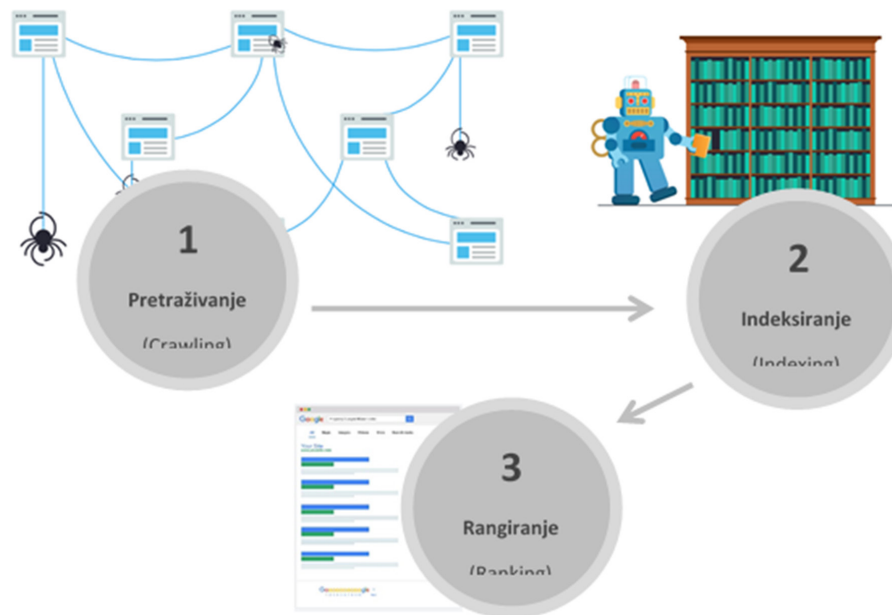
Izvor: Autor

Nakon prikaza procesa bookinga u slijedećem poglavlju prikazuje se princip rada Internet tražilica.

## 5. KAKO RADE INTERNET TRAZILICE

Tražilice rade tako što pretražuju milijarde web stranica koristeći vlastite web indekse. Indeksiranje odrađuju tzv. roboti pretraživača ili pauci. Tražilica se kreće web-om preuzimajući/pamteći *web site-ove*/stranice i prateći veze na tim stranicama kako bi otkrile novo nastale web stranice. Nove web stranice koje je tražilica našla dodaju se u strukturu podataka koja se zove indeks. Indeks uključuje sve otkrivene URL-ove zajedno s brojem relevantnih ključnih signala o sadržaju svakog URL-a, kao što su (1) **ključne riječi** otkrivene u sadržaju stranice – detektiranje teme koje pokriva web stranica, (2) **vrsta sadržaja** koji se indeksira (koristeći mikropodatke pod nazivom shema – a pokazuje što se nalazi na stranici, (3) **svježina stranice** - koliko je nedavno ažurirana, (4) **prethodni angažman stranice i / ili domene** - kako ukazuje

na to kako ljudi komuniciraju sa stranicom. Na temelju formiranih upita od strane korisnika, Internet tražilica ima za cilj da **uz visoki stupanj korelacije u odnosu na upit kroz rezultate algoritamskog/organskog pretraživanja korisniku predstaviti relevantan skup informacija**. Da bi bile učinkovite, tražilice moraju točno razumjeti upit, znati kakve/koje su informacije dostupne i korisnicima ih logično i točno predstaviti. Slijedeća slika (slika 2) prikazuje osnovni princip rada tražilica.



Slika 2. Temeljni prikaz rada Internet tražilica

Izvor: Autor

Nakon što korisnik upiše upit za pretraživanje u Internet tražilicu, tada **algoritamske procedure** tražilice sve stranice koje smatraju relevantnim **identificiraju**, pri čemu do izražaja dolazi dio algoritma zadužen za **hijerarhijsko rangiranje** relevantnih stranica unutar rezultata. Algoritmi zaduženi za hijerarhiju rezultata razlikuju se od tražilice do tražilice, što znači da npr. *web site* / web stranica koja je visoko rangirana unutar rezultata pretraživanja na google-u nemora biti visoko rangirana za isti upit na Yandex-u ili Bing-u. Uz upit za pretraživanje, tražilice za dobivanje rezultata koriste i druge relevantne podatke kao što su npr. tip uređaja sa kojega je upit postavljen, lokacija, detektirana povijest pretraživanja te jezik koji se koristi.

Budući je danas Google daleko najzastupljenija tražilica na svijetu gdje dominira sa 92.18% udjela na svjetskom tržištu (Mohsin, M., 2020), pored npr. *Baidu* koji se koristi uglavnom u *Kini*, i *Yandex-a* u *Rusiji* u radu je fokus upravo na njemu i nastavku se detaljnije objašnjava njegov pretraživački algoritam.

## 6. GOOGLE PRETRAŽIVAČKI ALGORITAM

Google je najpopularnija tražilica na planeti sa **otprilike 3,5 milijardi pojedinačnih pretraživanja / upita** na njihovoj platformi svaki dan (Mohsin, M. 2020). Kako algoritam za pretraživanje radi nije skroz poznato, no Google kontinuirano daje visokokvalitetne informacije o kontekstu i elementima funkcioniranja algoritama i to na visokoj razini. Nove web stranice stvaraju se svaki dan. Google može pronaći te stranice slijedeći veze iz postojećeg sadržaja koji je već indeksiran ili kada vlasnik novog *web site-a* izravno pošalje svoj “*Sitemap*”. Sva ažurira-

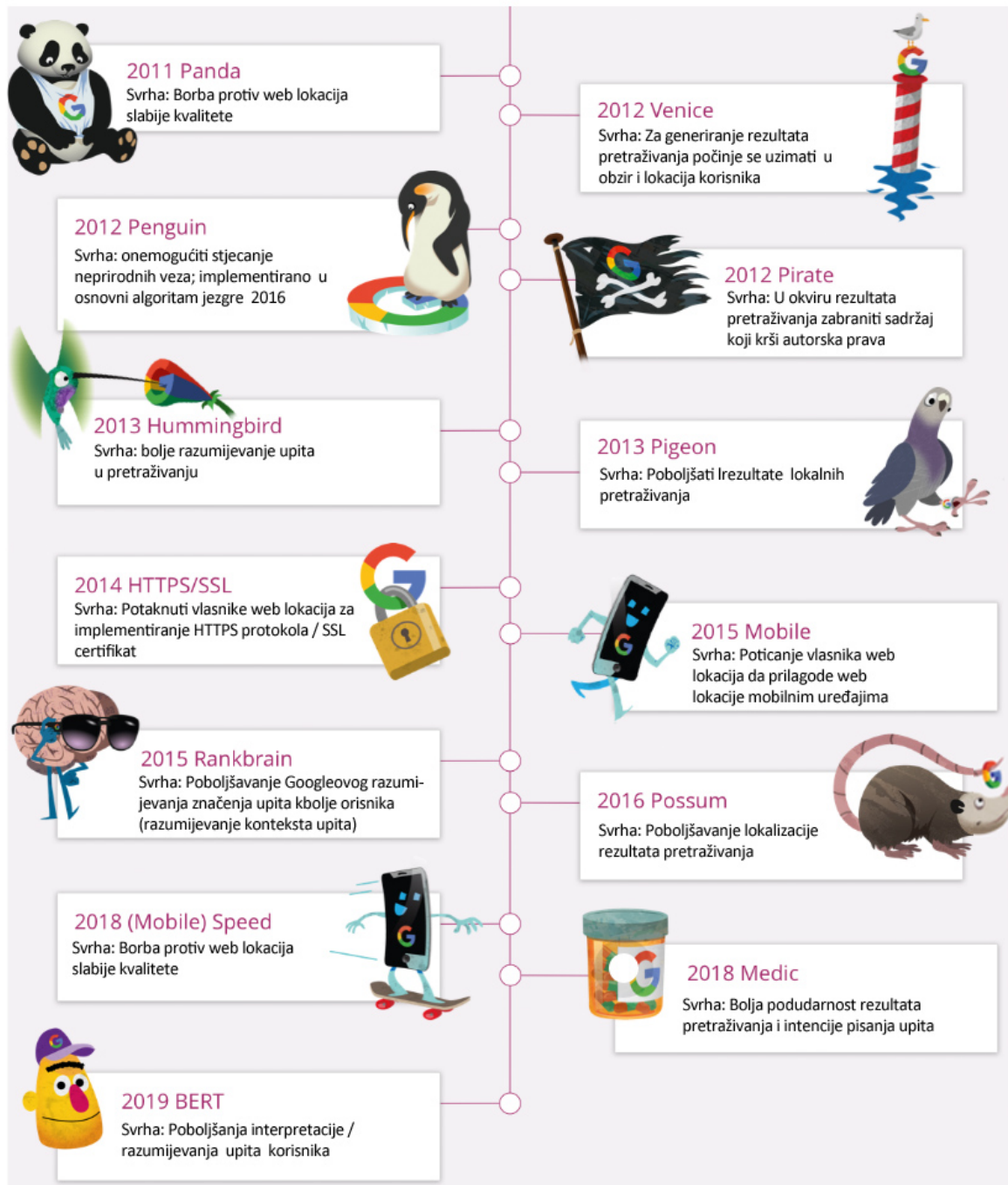
nja postojećeg sadržaja mogu se prijaviti Googleu tražeći od njih da spremi određeni URL. To se provodi putem Googleove konzole za pretraživanje. Iako Google ne navodi koliko često se web stranice indeksiraju, na kraju će se također naći svaki novi sadržaj koji je povezan sa postojećim sadržajem. Nakon što web pretraživački mehanizmi/pauci prikupe dovoljno informacija, vraćaju ih Googleu radi indeksiranja. Indeksiranje započinje analizom podataka web mjesta, uključujući pisani sadržaj, slike, video zapise i tehničku strukturu web mjesta. Google traži pozitivne i negativne **signale rangiranja (upravo su ti signali elementi koje treba uzeti u obzir, njih optimizirati u okviru web stranica, jer o kvaliteti njihove optimizacije ovisi vidljivost u okviru tražilice, odnosno pozicija u okviru rezultata pretraživanja)**, poput npr. ključnih riječi, svježine web stranica, itd. kako bi pokušao razumjeti o čemu se radi na bilo kojoj stranici na koju su indeksirani. Googleov indeks web stranica sadrži milijarde stranica i stotine milijuna gigabajta podataka. Da bi organizirao ove informacije, Google koristi algoritam strojnog učenja zvan RankBrain i bazu znanja pod nazivom Graf znanja. Ovo sve zajedno funkcionira kako bi Google mogao pružiti najrelevantniji mogući sadržaj za korisnike. Kad je indeksiranje dovršeno, prelazi se na akciju rangiranja. Sve što se događa do ove točke vrši se u pozadini, prije nego što korisnik ikada uđe u interakciju s Googleovom funkcionalnošću pretraživanja. Rangiranje je radnja koja se događa na temelju onoga što korisnik traži. Kada neki korisnik vrši pretragu Google razmatra pet glavnih čimbenika: (1) značenje upita, (2) relevantnost web stranice, (3) kvalitetu sadržaja, (4) upotrebljivost web stranice i (5) dodatni kontekst i postavke. Razmatranjem **značenja upita** određuje namjeru bilo kojeg pitanja krajnjeg korisnika. Google to koristi da bi odredio što točno netko traži kada izvrši pretragu. Google analizira svaki upit koristeći složene jezične modele izgrađene na temelju prethodnih pretraživanja i ponašanja u uporabi. Nakon što Google utvrdi namjeru korisnikovog upita za pretraživanje, pregledava sadržaj rangiranja web stranica radi **utvrđivanja najrelevantnije**. To omogućava analiza ključnih riječi pri čemu ključne riječi na web stranici moraju odgovarati Googleovom razumijevanju pitanja koje je korisnik postavio. Google uz ključne riječi pregledava i **kvalitetu i jedinstvenost sadržaja** na potrebnim web stranicama. To im pomaže da odrede prioritete koji rezultati dolaze na prvo mjesto gledanjem autoriteta određene web stranice, njezinog ranga i svježine na stranici. Glede upotrebljivosti google pri rangiranju daje prednost web stranicama koje su jednostavnije i lakše za korištenje pri čemu gleda sve, od brzine stranice do reaktivnosti. U smislu dodatnog konteksta i postavki google algoritam se bazira na prilagođavanju pretraživanja korisnika i specifičnim postavkama unutar google platforme.

Google osim što poslužuje korisnike informacijama (sve točnije i točnije) istovremeno uči i postaje bolji kao sustav. U tom smislu kao tražilica kontinuirano se nadograđuje u smislu poboljšavanja performansi. Slika 3 uz kratka objašnjenja prikazuje najvažnije promjene googleovog algoritma kroz vrijeme.

## 7. FAKTORI RANGIRANJA – GOOGLE RANKING FAKTORI

Kako bi hotel kao poslovni sustav mogao provoditi kvalitetne SEO strategije sa svrhom što bolje vidljivosti u okviru tražilica mora dobro biti upoznat sa čimbenicima koji utječu na organsko/algoritamsko rangiranje. Optimizacija za Internet tražilice je izuzetno dinamično područje koje se svakim danom sve brže razvija i mijenja te postaje sve sofisticiranije. Sve je važnije pratiti promjene u algoritmu rangiranja Google pretraživanja. Npr. u 2016. godini ažuriranja algoritama poput „Penguin 4.0” i „Possum” uveli su vrlo važne promijene u algoritmu i omogućili pametnije, čistije i semantičnije iskustvo pretraživanja.





Slika 3. Prikaz povijesti glavnih promjena u sklopu Google algoritma

Izvor: Prilagodba autora na temelju:

Hallebeck, GOOGLE., A brief history of Google's algorithm updates, 09.03.2020. Yoast, SEO for everyone. (Dostupno na: <https://google.pinterest.com/pin/241505598756212474/visual-search/?x=16&-google=16&google=530&google=671&cropSource=6> ), Pristupljeno: 14.07.2020.

Google koristi preko 200 faktora u svojim algoritamskim procedurama za određivanje pozicija na stranicama rezultata pretraživanja. Isto tako poznato je da se algoritam/mi poboljšavaju i ažuriraju i više od 3000 puta godišnje (Nada, A. 2020). Stoga u svrhu poboljšavanja on line prodajnih rezultata treba stalno pratiti te faktore, iste što kvalitetnije prema uputama Google-a optimizirati čime se osigurava bolja vidljivost i pozicija u okviru rezultata na tražilicama (Dean,

B. 2020, - kompletna lista google faktora za rangiranje za 2020 godinu uz objašnjenja funkcioniranja). Problematika detaljne pojedinačne važnosti google faktor za rangiranje, dakle istraživanje njihove pojedinačne i detaljne uloge i relevantnosti (istraživanje/određivanje pondera vrijednosti) u google algoritmu posebno je problemsko područje te bi dublja analiza u ovome trenutku uveliko premašila potrebe i okvire ovoga rada. Stoga se u nastavku rada u tablici 2. navodi 10 najvažnijih google faktora za rangiranje aktualnih za 2020 godinu (prema: Doron, GOOGLE. 2020 i Nada, A. 2020).

**Tablica 2.** 10 Najaktualnijih Google faktora za rangiranje za 2020 godinu

Google faktor za rangiranje	Objašnjenje uloge i relevantnosti u google algoritmu
<b>Najvažnijih 10 Google faktora za rangiranje prema (Doron, GOOGLE, 2020.)</b>	
1	<p><b>Content is Still King</b> Sadržaj je još uvijek KRALJ</p> <p><b>Kvaliteta sadržaja</b> Sadržaj visokog ranga odnosi se na dubinski sadržaj koji pokriva širok spektar teme. Sadržaj mora korisniku pružiti stvarnu vrijednost i trebao bi sadržavati vizualni sadržaj koji će dopuniti pisani sadržaj. <b>Zapamtite, Kvaliteta svaki put pobjeđuje količinu. Usredotočite se na vrijednost, a ne na broj riječi.</b> <b>Dužina sadržaja</b> Ne postoji jasno pravilo o optimalnom broju riječi za članak jer se ono razlikuje ovisno o temi. Međutim, relativno duži, cjelovitiji sadržaj obično postiže bolje rangiranje. Istraživanje Niel Patela otkriva povezanost između duljine sadržaja i najviših Google pozicija pretraživanja. <b>Savjet profesije:</b> Pomoću Googleove semantičke pretrage optimizirajte ciljanje ključnih riječi u svojim člancima. Semantičke upite potražite pretraživanjem rezultata “povezane pretrage” pri dnu stranice rezultata Google pretraživanja.</p>
2	<p><b>Freshness</b> Aktualnost/ Starost</p> <p>Svježina/Aktualnost/Starost - objavljivanja sadržaja Ovaj faktor prvobitno je uveden u algoritam u lipnju 2010. i imao je snažan utjecaj u posljednjih nekoliko godina. Dakle, bolju poziciju u okviru rezultata istraživanja uglavnom dobivaju sadržaji ”novijeg datuma objavljivanja”</p>
3	<p><b>Backlinks</b> Povratne veze</p> <p>Povratne veze ostaju jedan od najjačih signala rangiranja u Googleovom algoritmu pretraživanja. Što više veza postoji iz više domena visokog autoriteta, veće su šanse za rangiranje najboljih ključnih riječi. Internetski trgovci trebaju obratiti veliku pozornost na njihove profile povratnih veza, posebno s obzirom na nedavna ažuriranja, poput “Penguin 4.0”, koja čiste i filtriraju web mjesta s nekvalitetnim profilima povratnih veza.</p>
4	<p><b>Mobile First</b> Prilagodljivost za mobilne uređaje</p> <p>4. studenog 2016. Google je objavio ”mobile-first” indeksiranje. To znači da kompatibilnost web lokacije s mobilnim uređajem sada izravno utječe na njezinu ocjenu pretraživanja. U prošlosti su web dizajneri prvo gradili verzije za stolna računala, a potom i mobilne verzije <i>web site-a</i>. Danas, kada mobilna upotreba nadmašuje upotrebu stolnih/desktop računala, web stranice trebaju dati prioritet mobilnim verzijama kako bi pružile bolje korisničko iskustvo. Google-ov prvi pristup za mobilne uređaje već mijenja rezultate pretraživanja, posebno što se tiče lokalnih rezultata - korisnici sada primaju rezultate koji bolje ciljaju njihovu trenutnu lokaciju. Međutim, primjećuje se da geolokacija sve više aktivno utječe na lokalne upite pretraživanja i na stolnim računalima.</p>
5	<p><b>Page Speed</b> Brzina stranice</p> <p>S Google-ovim pristupom indeksiranja prvog mobilnog uređaja brzina stranice postala je presudnija nego ikad prije. Web stranice s malim brzinama stranica imat će teže vremensko rangiranje najboljih rezultata. Googleov cilj s ovim ažuriranjima je pružiti korisnicima rezultate pretraživanja, koji uključuju web stranice koje pružaju najbolje korisničko iskustvo.</p>

VAŽNOST KVALITETE PERFORMANSI HOTELSKIH WEB STRANICA  
ZA GENERIRANJE BOLJE VIDLJIVOSTI U OKVIRU INTERNET PRETRAŽIVAČA

Google faktor za rangiranje		Objašnjenje uloge i relevantnosti u google algoritmu
6	<b>Schema code</b> Code schema	SEO u velikoj mjeri "ide" lokalno, pa ako se pitate kako postići viši rang na Googleu, onda je ovo važan faktor rangiranja, posebno za SEO malih tvrtki/hotela. Označivački kôd sheme pomaže tražilicama da bolje razumiju određene tekstove poput adresa, telefonskih brojeva, recepata, recenzija i još mnogo toga. Posebno za lokalne tvrtke primjena "shema coda" sheme na cijelom web mjestu može biti od velike koristi. Na primjer, važno je osigurati da Googleu kažete gdje se nalazi vaša tvrtka primjenjujući ispravan kod sheme. Vidi točku 6. : <a href="https://google.yellowheadinc.com/blog/google-ranking-factors/">https://google.yellowheadinc.com/blog/google-ranking-factors/</a>
7	<b>Brand Power and Social Signals</b> Snaga brenda i društveni signali	Pretraživanja robnih marki/imena tvrtki/hotela pružaju jak signal Googleovom algoritmu pretraživanja. Što više prometa web lokacija dobije pretraživanjem robne marke, to će ga više prepoznati i cijiniti google algoritam. Uz to, primjećuje se da društveni signali s Facebooka, Reddita, Quora, Pinterest-a i drugih društvenih web mjesta također koreliraju sa rangiranjem u okviru rezultata pretraživanja. To ne znači da samo snažna Internetska društvena prisutnost može pokrenuti organski promet. Web lokacije koje kombiniraju snagu i društvene signale s naporima na svim ostalim SEO kanalima mogu postići veću vidljivost pretraživanja.
8	<b>Domain Power</b> Snaga domene	U prošlosti su domene točnog podudaranja bile siguran način da se poboljša vidljivost organskog pretraživanja. Iako nisu tako besprijekorne kao prije, domene i dalje imaju utjecaj na rangiranje. S pametnijim algoritmom Google-a još uvijek postoje dvije glavne značajke domene: Domene s egzaktnim podudaranjem još uvijek imaju veliku težinu - Kao primjer, za pretraživački upit „automobili“, očekivali bismo da ćemo pronaći najpopularnije brendove povezane sa automobilima na vrhunskim rezultatima pretraživanja (Ford, BMW, Top Gear, itd.). Umjesto toga, dobivamo točno podudaranje, tj. "cars.com". Seniornost domene - Starost domene još jedan je glavni faktor rangiranja. Novim domenama teže je postići ( treba im duže vrijeme) visoko rangiranje najboljih ključnih riječi, dok se čini da "starije" domene duže zadrže najviše pozicije.
9	<b>HTTPS</b> HTTPS sigurnosni protokol	Ovo je zapravo službeni faktor rangiranja od kolovoza 2014. godine, kada je prvi put objavljen na službenom blogu Google Webmaster Central. Službeni citat glasio je "Sigurnost je glavni prioritet za Google. Mnogo ulažemo u to da naše usluge imaju vodeću sigurnost u industriji, poput jake HTTPS enkripcije prema zadanim postavkama. To znači da, primjerice, korisnici koji pretražuju, koriste Gmail i Google Drive automatski imaju sigurnu vezu s Googleom." 17. listopada 2017. Google je objavio još jednu obavijest, upozoravajući webmastere na korištenje HTTP protokola sa web lokacijama na kojima je potrebno da korisnici unose svoje podatke. Iako se uvijek ne vidi značajan i direktan utjecaj na SEO za web lokacije koje su prešle na sigurnu HTTPS enkripciju, se preporučuje se web lokacija pređe na HTTPS kako bi se izbjegle moguće pogreške u budućim Googleovim ažuriranjima.
10	<b>User Experience UI / UX</b> Korisničko sučelje i korisničko iskustvo	UX je posljednji ali ne i najmanje važan faktor na ovom popisu. Kako se Google algoritam sve više nadograđuje i postaje pametniji, morate se više pažnje usredotočiti na pružanje sjajnog korisničkog iskustva. Teško je točno reći kako izmjeriti učinak UX-a, budući da se razlikuje ovisno o industriji i demografskom položaju. No, očučava se jaka povezanost između preciznog UI – User Interface/ User EXperience-a i dobrih položaja u okviru rezultata pretraživanja na tražilicama (u SERP-u). Vrlo je važno da web lokacija prvo mora biti funkcionalna. više: <a href="https://givegoodux.com/signal-vs-noise-cleaning-up-visual-clutter-in-ui-design/">https://givegoodux.com/signal-vs-noise-cleaning-up-visual-clutter-in-ui-design/</a>
<b>Najvažnijih 10 Google faktora za rangiranje prema (Nada, A., 2020.)</b>		
1	<b>Mobile First (Not Friendly)</b> Prilagodljivost za mobilne uređaje	Prvo mobilno - Rezultati s web lokacija optimiziranih za mobilne uređaje su prioritetni, a ne verzija/e za stolna računala. Stoga bi razvoj i optimizacija mobilnih doživljaja za web stranice trebao biti jedan od glavnih prioriteta u 2020. godini.

Google faktor za rangiranje	Objašnjenje uloge i relevantnosti u google algoritmu
2 <b>Zero Click Search Dilemma</b> Dilema pretraživanja bez klikova	<p>Nedavno istraživanje firme za marketinšku analitiku Jumpshot pokazalo je da 49% svih pretraživanja Googlea nema klikova. Što znači da gotovo polovica svih pretraživanja završava na SERP-u. Google je postao iznimno sofisticiran u odgovaranju na upite pretraživanja s raznim istaknutim isječcima, poput Googleovog okvira za odgovore koji je jedinstveni rezultat SERP-a koji pokreće graf znanja ili izvlači sa stranice koja daje najbolji mogući odgovor.</p> <p>Okvir s odgovorom obično je smješten iznad prvog organskog rezultata i upisanih oglasa. Postavljanje sadržaja na ovom mjestu nudi neke nevjerojatne prednosti: Povećana vidljivost marke, promet i konverzije; Niža potrošnja na Google Ads.</p> <p>Prednosti od toga što je vaš sadržaj naveden unutar Googleovog okvira za odgovore impresivne su. Ali kako možete vidjeti svoj sadržaj u Googleovim odgovornim okvirima? Evo pristupa istaknutoj optimizaciji isječaka:</p> <ol style="list-style-type: none"> <li>1) Identificirajte stranice na kojima su istaknuti isječci kritični za odgovor na namjeru korisničkog pretraživanja,</li> <li>2) Dodajte sadržaj od 40 do 60 riječi bloka koji se također naziva Snippet mamac, posebno dizajniran za rangiranje na istaknutom mjestu isječaka, i</li> <li>3) dodajte pitanja! 5-10 popularnih pitanja osmišljena za rangiranje na istaknutoj točki pitanja.</li> </ol>
3 <b>Rank Brain means relevance</b> Mozak – kontekst predstavlja relevantnost	<p>Google je započeo primjenu svoje <b>umjetne inteligencije (RankBrain)</b> još 2015. godine radi boljeg rangiranja stranica, ali tada se to nije smatralo ključnim elementom rangiranja. Sada sa svim analiziranim SEO podacima može se vidjeti jasna povezanost sa web lokacijama koje odgovaraju na upite pretraživanja, pružajući sjajan angažman korisnika i najbolje organske pozicije. RankBrain ocjenjuje stranice u “stvarnom vremenu” uspoređujući najprikladniji sadržaj s korisnikovom namjerom pretraživanja, ovo bi moglo biti jednostavno kao odgovor na pitanje uneseno u Google – Razumijevanje konteksta.</p>
4 <b>10 x Content is King</b> 10x Sadržaj je kralj	<p>Prošli su dani dosadnih, osnovnih i ponavljajućih sadržaja. Ako želite postići značajne korisničke angažmane u 2020. godini i šire, tada morate stvoriti imajte na umu formulu: 10x Sadržaj.</p> <p>Ali što je 10x sadržaj? 10x sadržaj je sadržaj koji je 10 puta bolji od rezultata s najvišim ocjenama za određenu ključnu riječ.</p> <p>Google je već dao prioritet korisničkom iskustvu kao ključnoj komponenti za rangiranje u okviru organskih pretraživanja, tako da je logično povezati to dvoje. 10x sadržaj znači razvijati najinformativnije, najlakše čitane i privlačne informacije o određenoj temi. Uzimajući u obzir potražnju, duljinu sadržaja, format, dizajn i strukturu...</p> <p>Savjet: Najlakši način za pronalaženje popularnog i zanimljivog sadržaja je pomoću jednostavne Google pretrage, upišite svoje ciljne upite pretraživanja i analizirajte stranice najvišeg ranga i njihov sadržaj kako bi naučili kako formirati buduće strategije sadržaja.</p>
5 <b>Superb Backlinks</b> Izvršne povratne veze	<p>Povratne veze i dalje su glavni faktor uspjeha pri rangiranju, ali sve je važnije dobivanje relevantnih kontekstualnih veza iz uglednih domena visokih autoriteta.</p> <p>Ne riskirajte penalizaciju web-mjesta zbog nekoliko nekvalitetnih veza jer će mogući rang / gubitak prometa i vrijeme da se povrate najviši rezultati na stranici s rezultatima nadmašiti početni dobitak vidljivosti.</p> <p>Uvijek je dobro koristiti alate za veze kao što su Majestic SEO ili Ahrefs za analizu profila konkurentskih veza i pronalaženje mogućnosti za doseganje.</p>
6 <b>Capitalize on Visual Search</b> Iskorištavanje vizualnog pretraživanja	<p>Google nastavlja s dodavanjem različite značajke pretraživanja u svoj asortiman, a možda je najzuidljivija Google Objektiv (Google Lens) koji omogućuje pretraživanje onoga što vidite koristeći samo svoj fotoaparati ili fotografiju.</p> <p>Implikacija ove značajke vizualnog pretraživanja jest da će inherentno brandovi imati nove mogućnosti za interakciju s relevantnom publikom putem pretraživanja - posebno maloprodajnih marki. Savjet: Dodavanje slika na mape web stranica XML i primjena strukturiranih podataka pomoći će u iskorištavanju vizualnog pretraživanja.</p>

Google faktor za rangiranje		Objašnjenje uloge i relevantnosti u google algoritmu
7	<b>Rich Snippets (It's about time)</b> Bogati isječci (krajnje je vrijeme)	Još uvijek je jako iznenađujuće kako malo web programeri / web dizajneri ("web masteri") koriste moć dodavanja shema. Sve što Google-u olakšava razumijevanje podataka na web lokaciji i pomaže da se sadržaj pokaže kao bogati isječci u SERP-ovima treba smatrati vitalnom komponentom optimizacije. Dodavanje strukturiranih podataka može poboljšati stopu klikova (CTR) za 30 posto, što znači dodatne posjete i gotovo nula/ništa dodatnog troška. Postoji više od 600 različitih vrsta oznaka shema koje web stranice mogu birati, tako da više nema opravdanja da se zanemaruje ova vrlo jednostavna, ali učinkovita organska komponenta rangiranja i pretvorbe.
8	<b>Off the Charts Title Tag Copy</b> Kopiraj naslov i naslova grafikona	Pozicioniranje web stranice na vrh SERP-ova je sjajno izuzev ako nitko ne klikne na vaš rezultat. A nije tajna zašto se to događa: Google je počeo gomilati stranicu rezultata pretraživanja oglasima, okvirima za odgovore i drugim istaknutim isječcima što je rezultiralo porastom pretraživanja bez ikakvih klikova i padom organskih CTR-ova. Da bi se istakli u SERP-ovima, naslov i meta opis (Title tag i meta description) trebaju vrisnuti „klikni ovdje“ ili će u protivnom unos biti zanemaren. Pri optimizaciji naslova i meta opisa uzimajte u obzir sljedeće: <b>Oznake naslova (Title tag)</b> Pišite emocionalne naslove (ljude motiviraju osjećaji) Koristite jedinstveni znak razdvajanja naslova (istaknite se iz mnoštva) Uključite emojije i posebne likove (vizualni elementi privlače pažnju) Uključite brojeve / datume Uključite pozitivno raspoloženje Stvaranje Unicode naslova (privlačna značajka) <b>Meta opisi (Meta description)</b> Ostavite ljude koji žele više Uključite primarne ključne riječi Koristite aktivne glagole i radnje
9	<b>Authentic Business Information</b> Autentične poslovne informacije	Lokalni SEO zahtijeva vrlo vlastitu strategiju koja se razlikuje od ostalih aktivnosti koje se tiču optimizacije, ali na općenitijoj razini u smislu dodavanja autentičnih poslovnih podataka na Google My Businessu, Facebooku i ključni su lokalni čimbenici rangiranja. Lokalni naponi za SEO optimizaciju trebaju uključivati: Ispravan NAP - (name, adress, phone) - ime, adresa i telefonski broj Autentični popisi tvrtki na relevantnim resursima Recenzije s renomiranih stranica Sadržaj koji ispunjava potražnju lokalnog pretraživanja
10	<b>Master Search Demand &amp; Intent</b> Glavna intencija i zahtjev pretraživanja	Ovaj dio možda nije u direktnoj korelaciji s rangiranjem organskog pretraživanja, međutim pravilno mapiranje potražnje po ključnim riječima kao i planiranje sadržaja klasificiranjem i razumijevanjem namjere korisničkog pretraživanja presudno je za uspjeh rangiranja bilo koje web lokacije. Jednostavan alat za istraživanje ključnih riječi, koji donosi sveobuhvatne značajke pretraživanja, je npr, Keyword Finder.

**Izvor:** Autor, prema:

Doron Wolffberg, Top 10 Google Ranking Factors for 2020, yellow HEAD, Dostupno na <https://google.yellowheadinc.com/blog/google-ranking-factors/> Pristupljeno, 07.06.2020.

Nada, A., 10 most Decisive Google (SEO) Ranking Factors in 2020., Uptimiser.com, Dostupno na: <https://google.uptimiser.com.hk/seo-google-ranking-factors/>, Pristupljeno: 13.07.2020.

U prethodnoj su tablici prikazani glavnih 10 google ranking faktora za 2020 godinu. Isti su prikazani da bi se dobio uvid u relevantne činjenice / elemente koje google koristi/tretira kada ocjenjuje relevantnost/kvalitetu određene web stranice za određeni upit. Svrha prikazivanja tih

elemenata / faktora jest da se spozna njihova važnost i način funkcioniranja kako bi se iste koristile u praksi i primjenjivale u daljnim istraživanjima. Kako bi prethodna izlaganja poprimila potpuni smisao u nastavku rada prikazuje se način mjerenja nekih od google faktora za rangiranje korištenjem SEMrush softwera.

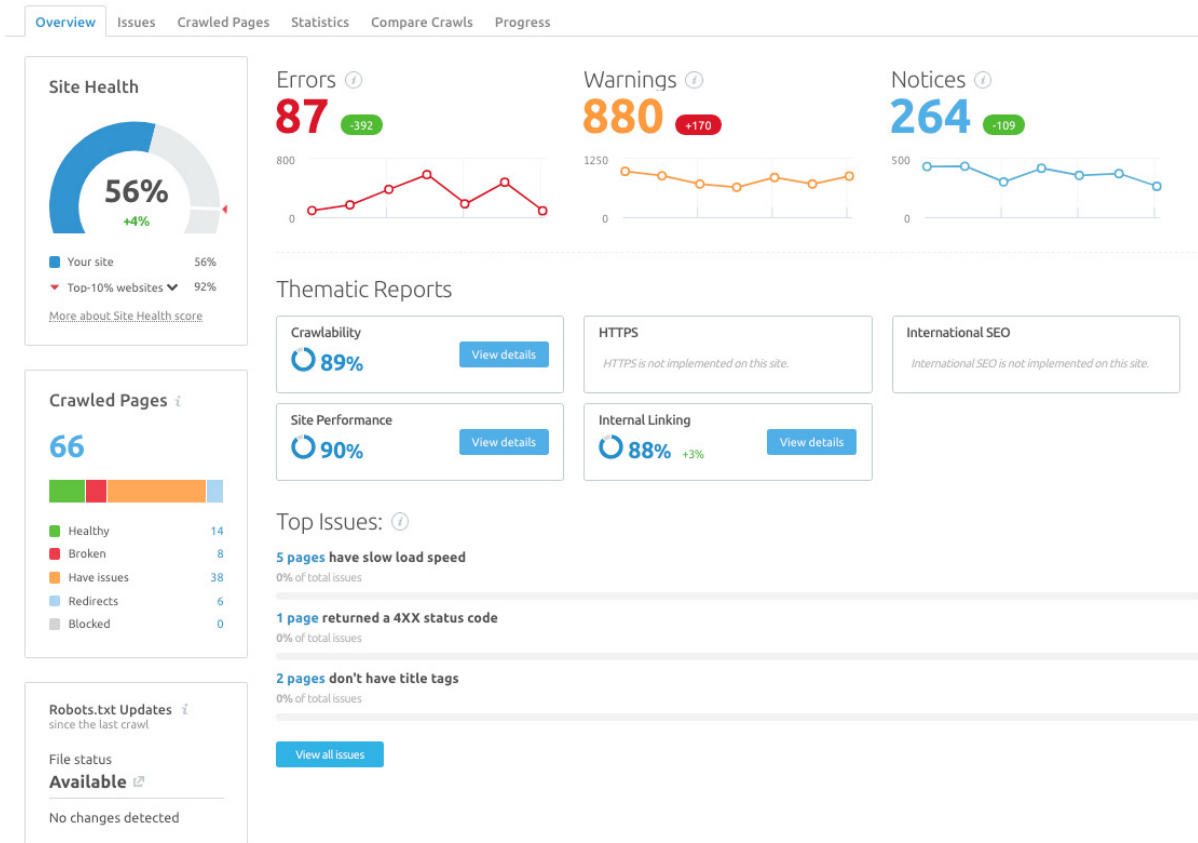
## 8. PRIKAZI METRIKE GOOGLE RANKING FAKTORA NA PRIMJERU SEMRUSH IZVJEŠTAJA ANALIZE *WEB SITE*-OVA HOTELA SA 5 ZVJEZDICA U RH

U prethodnim poglavljima uz opisivanje procesa bookinga opisani su google algoritam i google faktori za rangiranje kao elementi koje google u svojem algoritmu za određivanje hijerarhije u okviru rezultata pretrživanja tretira. Dakle, kroz prethodna se poglavlja pokušao dati **uvid u kompletnan proces bookinga** promatrajući isti u kontekstu **sudionika i u kontekstu elemenata** koji na taj proces u odnosnu sudionike utječu. Elementi / faktori koji utječu na proces bookinga promatrani su s obzirom na faze u procesu "bookinga" u kojima dolaze do izražaja te s obzirom na tehnologiju koja je dominantna u fazi koja se promatra. Da bi prethodna izlaganja imala potpunu svrhu u ovom se poglavljju predstavljaju prikazi / izvještaji rezultata analiza i primjeri podataka koji se iz njih mogu iščitavati. Na temelju tako dobivenih rezultata istraživanja i generiranih izvještaja mogu se izvlačiti relevantni zaključci i poduzimati konkretne radnje u praksi. Dakle, u nastavku rada neće se predstavljati sami rezultati istraživanja (budući da numeričko predstavljanje rezultata empirijskog istraživanja i interpretacija istih nije bio cilj ovoga rada), već će prikazati adekvatni izgenerirani izvještaji kao rezultati multidimenzionalne dubinske analize web stranica svih hotela sa 5 zvjezdica u Republici Hrvatskoj (kako bi se dobio uvid u mogućnosti koje isti pružaju u kontekstu donošenja zaključaka za primjenu u praksi te za stvaranje uvida u problemska područja za daljnja istraživanja). U istraživanjima je korišten SEMrush software. Pokretanjem analitičkih projekata za svaki hotel sa 5 zvjezdica u RH dobiveni su pojedinačni uvidi u stanje kvalitete web stranica svakoga hotela prema velikom broju i tipu parametara. Npr. putem **Site Audit analize** istražila se kvaliteta web stranica u okviru grešaka, upozorenja i obavijesti o kvaliteti web stranica. Pojedinačno se ispitala "Crawlability" kvaliteta (Site Indexability, Pages Crawled, Pages Crawl Depth, HTTP Status Code, Crawl Budget Waste), Site performance kvaliteta ( Page/html/ Load Speed, Avg. Page/html LoadSpeed, Number and Size of Java Script and CSS, Performance Issues), HTTPS, International SEO, Internal Linking (Pages Crawl Depth, Incoming/Outgoing Internal Links, Internal Link Distribution and Issues). **Analizom povratnih veza (Backlink Audit)** dobio je detaljan uvid u stanje povratnih veza svakoga od hotela. Upravo su povratne veze u prethodnom poglavljju detektirane navedene kao jedan od glavnih google ranking faktora za 2020 godinu.

U nastavku se za nekoliko nasumično izabranih hotela prikazuje nekoliko primjera izvještaja kako bi se dobio uvid u mogućnosti i potencijal koja pružaju suvremena softverska rješenja kao što je SEMrush. Takovi se alati mogu koristiti u svrhu ispitivanja i unaprijeđenja performansi web stranica putem lociranja mjesta nedostataka u okviru web stranica, a sa krajnjim ciljem unaprijeđenja istih. Upravo se tako, putem popravljivanja nedostataka i poboljšavanja performansi web stranica hotela može djelovati navidljivost u okviru Internet tražilica.

Rezultati Site Audit analize pokazuju generalno stanje određenog *web site-a*. Nadalje, prikazivanjem **Backlink Audit** i **HTTPS** izvještaja (izabrano je prikazivanje ovih komponenti rezultata istraživanja budući spadaju u kategoriju 10 najvažnijih google faktora za rangiranje) želi se ukazati na opravdanost korištenja alata kao što je SEMrush i njemu sličnih sa osnovnom svrhom utvrđivanja kvalitete pojedinih google ranking faktora.

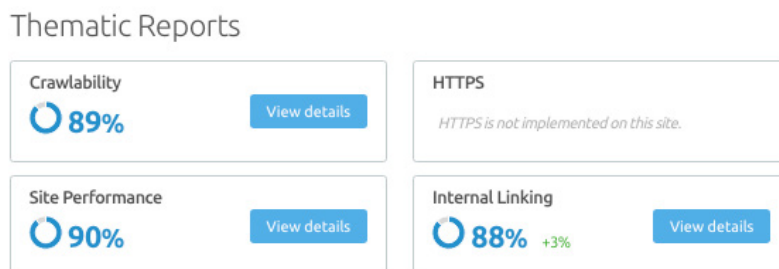
# VAŽNOST KVALITETE PERFORMANSI HOTELSKIH WEB STRANICA ZA GENERIRANJE BOLJE VIDLJIVOSTI U OKVIRU INTERNET PRETRAŽIVAČA



**Slika 4. 10** Prikaz Site Audit analize web lokacije hotela - [SEMrush software]  
Izvor: Autor - vlastita istraživanja (Hoteli sa 5 zvjezdica u RH)

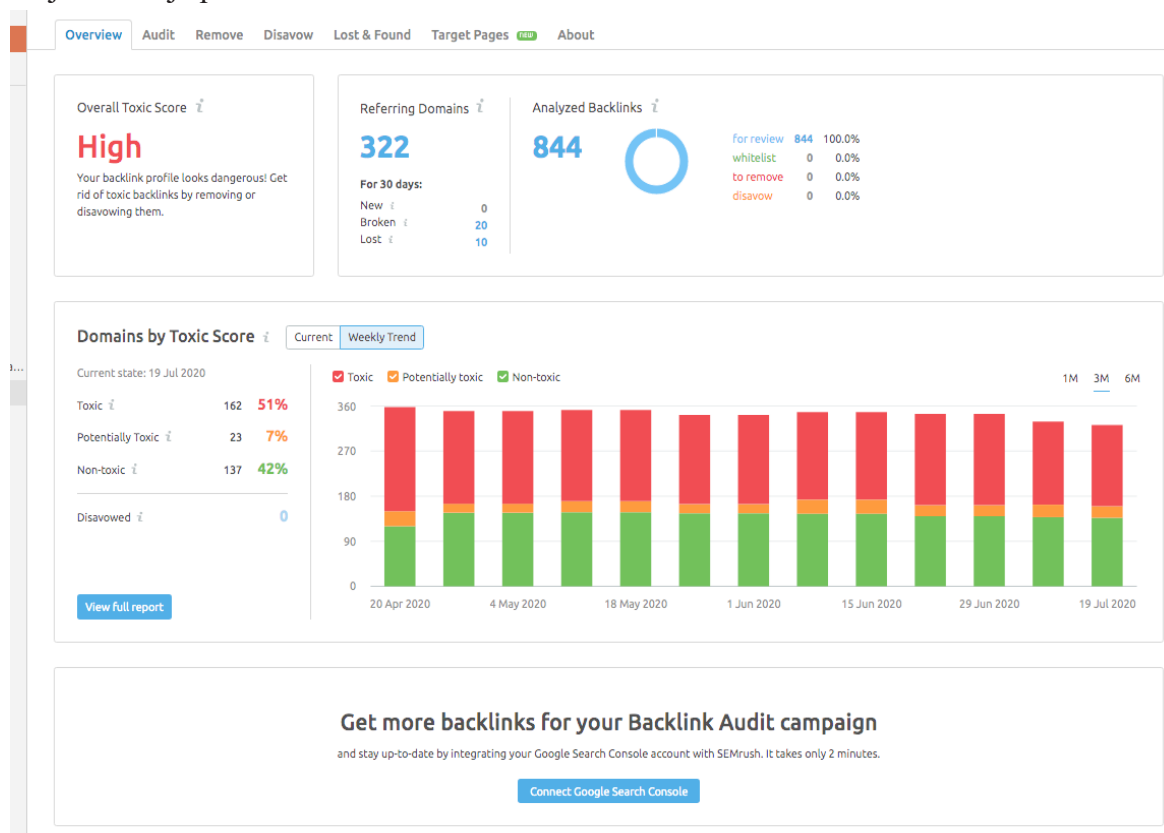
Site Audit analizom na početnom ekranu kontrolne ploče se dobiva generalni pregled kvalitete *web site* kojeg se promatra. Na prikazanom primjeru hotel čiji se web site analizirao ukupno "zdravlje" web sitea ocijenjeno je sa 56%, što je popraćeno sa 87 grešaka, 880 upozorenja i 264 obavijesti.

Svaka od prikazanih kategorija može se putem tematskih izvještaja (Thematic Reports) detaljno razmatrati radi dobivanja konkretnijih podataka i donošenje relevantnijih zaključaka, a osnovna svrha sastoji se u detektiranju grešaka i ispravljanju istih. Isto tako u slučaju ovoga hotela vidimo da **HTTPS protokol nije instaliran** što direktno utječe na dodjeljivanje slabije pozicije web site-a tog hotela u rezultatima pretraživanja na tražilici (vidi detaljniji/uvećan prikaz na slici 5).



**Slika 5. 10** Prikaz Site Audit analize web mjesta hotela - [SEMrush software]  
Izvor: Autor - vlastita istraživanja (Hoteli sa 5 zvjezdica u RH)

Temeljita revizija / analiza povratnih veza vrlo je bitna komponenta ispitivanja kvalitete *web site-a*. Omogućava otkrivanje rizičnosti *web site* / web stranice i prepoznavanje slabih linkova. Veze s nekvalitetnih web stranica mogu oštetiti ocijeni *web site-a*. Stoga je vrlo bitno provoditi detaljne revizije povratnih veza.



Slika 6. Početni ekran Backlink analitičkog web mjesta - [SEMrush software]

Izvor: Autor - vlastita istraživanja (Hoteli sa 5 zvjezdica u RH)

”Overall Toxic Score” analitička je komponenta pokazuje rezultat toksičnosti na *web site-u* i temelji se na broju toksičnih povratnih veza koje vode do *web site-a* i važnosti otkrivenih toksičnih markera.

Primjećuje se da je razina ”toksičnosti” linkova na *web site-u* hotela koji se promatra zaista velika. Na početnom ekranu semrush automatski upozorava vlasnika *web site-a* kako profil povratnih veza izgleda opasno i da ih treba ili ukloniti ili otkazati “*Your backlink profile looks dangerous! Get rid of toxic backlinks by removing or disavowing them*“. Daljnjim detaljnim proučavanjem i analizama svih podanalitičkih komponenti backlink audit-a (kao što su npr. Referring Domains, Analyzed Backlinks, Domain by toxic Score, Anchor types, Top Anchors, Link Attributes, Top Subpath by Toxic Domains, itd.) dobija se detaljan uvid u kvalitetu backlinkova kao važnog google faktora za rangiranje. Na temelju prikaza izgeneriranih izvještaja dobivenih analizama web mjesta provedenih SEMrush alatom vidi se mogućnost **detektiranja nedostataka u kvaliteti optimizacije pojedinih elemenata na *web site-u* / *web stranicama*** koji ujedno predstavljaju i vrlo važne google faktore za rangiranje. Njihovim detektiranjem, a kasnije ispravljanjem / optimiziranjem direktno se može utjecati na vidljivost u okviru tražilica čime se dokazuje h2 hipoteza.



## 9. ZAKLJUČAK

Svaki hotel danas nastoji što veći broj on line rezervacija odnosno prodaje ostvariti putem direktnog on line kanala prodaje, znači putem vlastitog *web site-a* (Mannix, S., 2020). Da bi hotel kao poslovni sustav potencirao dolazak korisnika na vlastiti *web site* mora razumijeti i znati koristiti načine kojima se korisnike privlači na *web site*. U pojedinim fazama u procesu bookinga korisnik je dominantno orijentiran na korištenje određenog tipa tehnologije. U ovome se radi iznosi problematika važnosti vidljivosti *web site* hotela u okviru Internet tražilica pa je stoga u radu i fokus na optimiziranju google faktora za rangiranje na kojima se spomenuta vidljivost temelji. Za poslovanje svakog hotela kao poslovnog sustava od izuzetne je važnosti razumijevanje funkcioniranja google algoritma budući da broj on line rezervacija putem web stranice hotela ovisi o broju posjetitelja na *web site-u* određenog hotela, te da je broj posjetitelja *web site-a* određenog hotela posljedica kvalitete hotelskih web stranica koju ocjenjuje google algoritam dodjeljivanjem pozicije u okviru organskih / algoritamskih rezultata na tražilici. Kako bi google algoritam pojedini *web site* hotela dobro ocijenio i dodijelio mu dobru poziciju u okviru rezultata pretraživanja faktori google algoritma u okviru web stranica trebaju se u što većoj mjeri i što bolje optimizirati. Hipotetski gledano, može se zaključiti da bi se prvo mjesto u okviru organskih/algoritamskih rezultata pretraživanja zaslužilo kada bi se sve google faktore za rangiranje uspijelo pojedinačno savršeno optimizirati i istovremeno staviti u savršeni međusobni odnos. No, kako je točna formula google algoritma tajna, a google daje pojedinačne egzaktno i kontekstualne smjernice za optimizaciju elemenata web stranica / faktora za rangiranje, pristup svakog poslovnog subjekta pa tako i hotela trebalo bi biti nastojanje da u najvećoj mogućoj mjeri iste optimizira. Dakle, ovim radom željelo se doprinijeti rasvijetljavanju problematike važnosti vidljivosti u okviru Internet tražilica putem objašnjavanja funkcioniranja google algoritma i elemenata na kojima počiva te time djelovati na stvaranje pretpostavki za unaprijeđenje on line prodajnih procesa hotela.

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# ELEMENTI KONTROLNE FUNKCIJE UPRAVLJANJA

## ELEMENTS OF CONTROL FUNCTION OF THE MANAGEMENT

Slobodan N. Bracanović<sup>1</sup>

DOI:

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**Sažetak:** *Trajne, vječite, komparativne i konkuretske prednosti, ne postoje. Kontrola je regulatorni proces. Povezana je sa planiranjem. Mehanizmima i instrumentima kontrole upravljači: prate poslovne tokove i devijacije i utvrđuju uzroke koji umanjuju efikasnost i efektivnost organizacije. Kontrolisanje je proces koji se kontinuelno dalje usavršava.*

**Ključne riječi:** *Kontrola, planiranje, elementi, regulacija, instrumenti, uzroci, tok, odstupanje, usavršavanje.*

**Abstract:** *There are no lasting, eternal, comparative and competitive advantages. Control is a regulatory process. It is related to planning. Managers' mechanisms and instruments of control: monitor business flows and deviations and determine the causes that reduce the efficiency and effectiveness of the organization. Controlling is a process that is continuously further improved.*

**Keywords:** *Control, Planning, Elements, Regulation, Instruments, Causes, Flow, Deviation, Improvement*

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### 1. PRETHODNE ODREDNICE

Aktivnost i preduzimljivost (spremnost, akcija, opreznost i dr.) bitne su determinante efikasnosti i uspješnosti organizacije. Ali ne postoje trajno uspješne organizacije (privredni subjekti i dr.), jer uspješnost je i, vrlo, promjenljiva kategorija! Uspješne organizacije (6) nužno moraju u kontinuitetu da kreativno stvaraju, rade, uče; kao i da se prema potrebi mijenjaju, transformišu (ali ne i previše jer ovo vodi u stihiju i haotično stanje), usklađeno sa tehnologijom i izazovima bližeg i (ili) daljeg okruženja. Savremenost, zahtijeva nove oblike organizacije i vizije, razvoja.

Kontrola je usmjeravajući, koordinativni i regulatorni tok, proces kojim se: postavljaju kriterijumi, mjerila, postupci, norme, normativi i standardi za postizanje organizacionih ciljeva i zadataka; upoređuju ostvareni učinci sa utvrđenim standardima; realizuju korektivne aktivnosti (u širem, obuhvatnom smislu) i akcije (u užem, neposrednom smislu), kada je neophodno da determinante budu na, standardom, nivou. Kontrolisanje (kontrola) podrazumijeva upravljačku i rukovodeću aktivnost, koja pretpostavlja niz („lepezu“, „spektar“, „dijapazon“) postupaka: nadgledanje, ocjenu, procjenu, mjerenje (kvantifikovanje), poređenje (komparaciju) i unapređivanje različitih aktivnosti i djelatnosti organizacije. Neophodno je naglasiti i: međuzročnost, međuzavisnost i međuslovljenost planiranja (kao početne i prve među jednakim funkcijama upravljanja) i kontrole. Ove funkcije i djelatnosti menadžmentske strukture blisko su povezane. Planske učinke nužno je kontrolisati, u područjima prakse.

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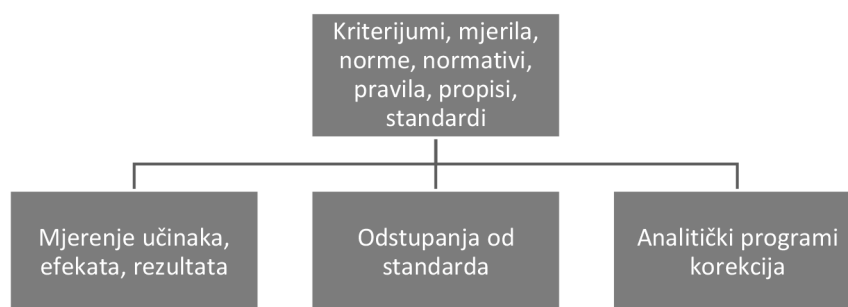
Primjenjujući mehanizme i instrumentarijum kontrole, upravljači (tj. menadžeri) mogu uočiti: deformacije, propuste, greške, promašaje, poremećaje u privrednoj (poslovnoj) aktivnosti i utvrđivati uzročnike koji sputavaju i umanjuju: produktivnost, ekonomičnost, rentabilnost, kao i efikasnost i efektivnost organizacije. Kontrola je veoma bitna funkcija imajući u vidu da su i potencijalni i realno ostvarivi i ostvareni gubici u poslovanju veliki kada privredni subjekt (preduzeće, korporacija) ne ispunjava utvrđene kriterijume i (ili) standarde. Potrebno je nadgledati (nadzor) i postizati standarde kvaliteta i ovo pretpostavlja i adekvatno usavršavanje, dokvalifikaciju, obuku, zaposlenih. Metodi kontrole, stalno, se unapređuju.

Praktično, kontrola je funkcija svakog menadžera, na svim nivoima (od najnižeg, preko srednjeg, do najvišeg). (1). Odgovornost za realizaciju kontrole odnosi se na sve menadžere koji su u obavezi i zaduženju realizovanja planiranih aktivnosti (planova). Kontrola i nadzor u savremenim uslovima privređivanja dobijaju na svom značaju.

Kontrolisanje, koje obavljaju upravljači, menadžeri, veoma je kompleksna i složena aktivnost i dinamički, usmjeravajući proces. Kontrolisanje ne vrši se jedino u svrsi sticanja uvida u odrednice („performanse“) realnih input-autputa; realizacije proizvoda i (ili) pružanja usluga i preduzimanja marketinških aktivnosti. Naime, svrha kontrolisanja je i sagledavanje učinaka (2); ponašanja i rezultata obavljanja menadžerskih funkcija (koncipiranja, programiranja, planiranja, organizovanja, vođenja i rukovođenja, kontrolisanja i samokontrolisanja), svih zaposlenih (radno angažovanih) pojedinačno i u grupi, timu, grupaciji, kolektivu, organizaciji i (ili) instituciji, ustanovi. (5;285-286).

## 2. BLIŽE DETERMINANTE KONTROLNOG PROCESA

Kontrola podrazumijeva kontinuelni, dinamički, informatičko-kibernetički (i računarski) proces. Suštinski proces kontrolisanja: otpočinje utvrđivanjem kriterijuma, mjerila, normi, normativa, propisa, pravila, standarda; kvantificiranjem (mjenjenjem) učinaka i komparacijom efekata sa standardima. Ukoliko, učinci razilaze se, odstupaju od planiranih i standardizovanih, istražuju se i (ili) analiziraju uzročnici oscilacija, devijacija; pripremaju i preduzimaju korektivni planovi i programi i aktivnosti (akcije) kako bi se postigli planirani ciljni rezultati.



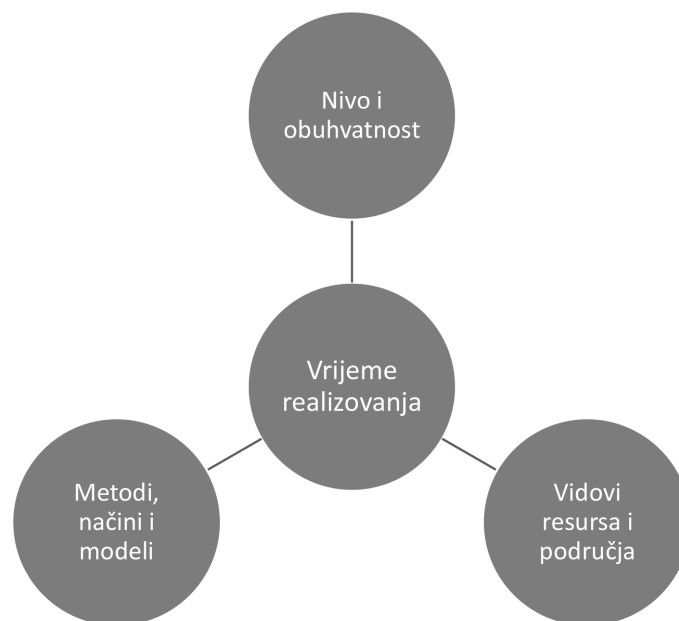
**Dijagram 1.** Kibernetički tok, proces, kontrolisanja u privrednim i ostalim subjektima:

Utvrđene faze, međufaze i (ili) etape i međuetape modela procesa (konstantnog i kibernetičkog) kontrolisanja, karakteristične su za sve oblike, vidove, vrste, kontrole (proizvodnje, usluga, zaliha sirovina, materijala, primarnih proizvoda, poluproizvoda, nedovršenih, gotovih proizvoda, finansijskih kretanja, učinaka elemenata, djelova, cjeline organizacije i dr.). Organizacija, sistem se usmjerava ka cilju.

Standardi označavaju podlogu za kvantificiranje radnih i organizacionih, proizvodno-uslužnih determinanti. Standard nužno treba da omogućiti postizanje cilja. Standarde utvrđuju nadležni državni (javni) organi, ili organi međunarodnih organizacija, u raznim domenima (poznati su, karakteristični, ISO standardi kvaliteta). Kriterijumima, normativima i mjerilima, kao bazom klasifikovanja, manifestuju se ranovrsne podjele, diobe standarda (fizički, troškovni, kapitalni, prihodni, programski i projektni, materijalni i nematerijalni, objektivni, subjektivni, kombinovani i dr.). Potencira se jasno, precizno, tj. egzaktno mjerenje koje je moguće iskazati (u adekvatnim jedinicama mjere); dok u određenim oblicima ovo i nije ostvarivo. **Metodi** (načini) postizanja standardizovanih mjerila su raznovrsni (često se primjenjuju istorijski, tradicionalni; komparativni, tehnički, tehnološki, subjektivni i dr.). Ovi metodi nijesu kruti, uski, izolovani, već su međusobno i povezani. Kvantificiranje, mjerenje rezultata, efekata, učinaka („performansi“) naredna je faza i (ili) u toku, procesu kontrole. Etape moguće je tumačiti i kao djelove (segmente) faza. Organizacije razvijaju sisteme kvantificiranja, mjerila, za utvrđivanje realnog, faktičkog stanja (kakvo jeste). Primjenjuju se raznovrsni principi, načela (reprezentativnost uzorka cjelokupne mase, neposredna povezanost sa standardima, pouzdanost, sigurnost, validnost, vjerodostojnost i dr.). Nužna je, egzaktnost. (5; 287-289).

Komparacija (poređenje) efekata, učinaka, sa kriterijumima, normama i standardima, jedan je od bitnih koraka, „stepenika“ (iterativnih postupaka, „iteracija“) kontrolnog procesa. Pouzdanost uporedivosti uslovljena je: sistemom kvantificiranja, mjerenja (mjerni sistemi); kao i informacionim sistemom za praćenje radnih i ukupnih postignuća u privrednim subjektima. Neophodno je utvrditi dozvoljene okvire, opsege tolerancije. Premašivanjem graničnika odstupanja preduzima se: priprema i realizovanje plana, programa i (ili) projekta, korektivnih akcija, za otklanjanje propusta, promašaja i nedostataka. Primjenjuju se i posebni i specijalni „softveri“ za korektivne akcije, prije samog plasiranja, kanalsanja proizvoda i (ili) usluge, na prostore tržišta. (5; 290, 291).

Oblici, vidovi, vrste, kontrolisanja mogu biti raznovrsni. Klasifikacija, podjela (dioba) odvija se usklađeno sa relevantnim normama, kriterijumima. Izostajanjem kontrolnog procesa svaka organizacija suočava se sa velikim ili pogubnim rizičnostima!



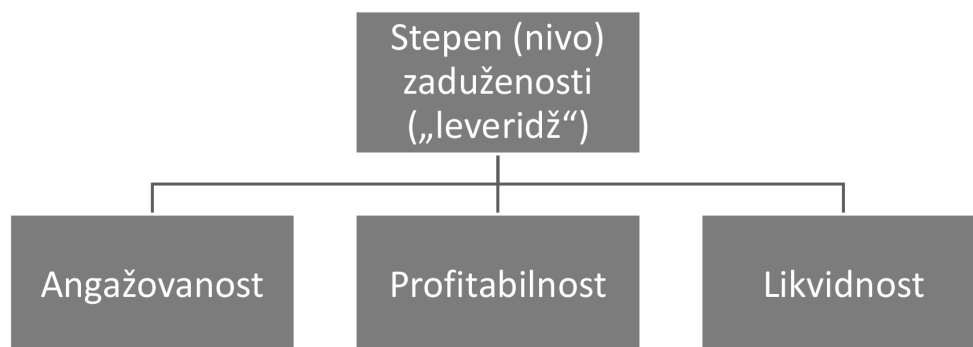
**Dijagram 2.** Kriterijumi, oblici, vrste, tokova kontrole, u privrednoj i dr. organizaciji:

Prema nivou menadžera i obuhvatnosti, kontrola može biti: strategijska, taktička, operativna (tekuća), mješovita (3); dok prema obuhvatu može da bude: upravljačka, rukovodeća, tehnička, tehnološka, organizaciona i dr. Pored ovog, saglasno vremenu realizovanja, kontrola može biti: preventivna („eh ante“), tekuća, naknadna („eh post“). Isto tako, prema metodima i modelima može biti: birokratska (administrativno-tehnička i režijska), objektivna, subjektivna, normativna, grupna, timska, udružena, („klanovska“), individualna (lična), samokontrola (samoupravni oblik). Osim ovog, saglasno vidovima (vrstama) resursa i područja (oblasti) razlikujemo: kontrolu sredstava i predmeta rada, materijala, proizvoda, ljudskih potencijala i kadrova, finansijsku, informacija, kvaliteta, strukture i kvantiteta i dr; odnosno i dnevnu (operacijsku), menadžersku na svim nivoima, kao i službi i, svih, zaposlenih. (5; 291-292).

Potrebno je kristalisati ulogu i značaj određenih vidova kontrole. Preventivna kontrola odvija se predviđanjem učinaka i odgovora na očekivane transformacije i predstavlja najoptimalniji (najpoželjniji, najsvrsishodniji, najprimjereniji) oblik kontrole sa ciljem i svrhom prevencija nastajanja deformacija u poslovanju (privređivanju) i upravljačkim strukturama organizacije. Sakupljaju se (prikupljaju) i koncentrišu informacije o mogućim odstupanjima (razmimoilaženjima) postignutih od planiranih učinaka, kao i odvija upravljačko preduzimanje akcija (preduzimljivost) prije same pojave devijacije. Zahtijevaju se posebno i pravovremene i tačne (ispravne i razumljive) informacije. Narod kaže: „Bolje spriječiti, nego liječiti“!

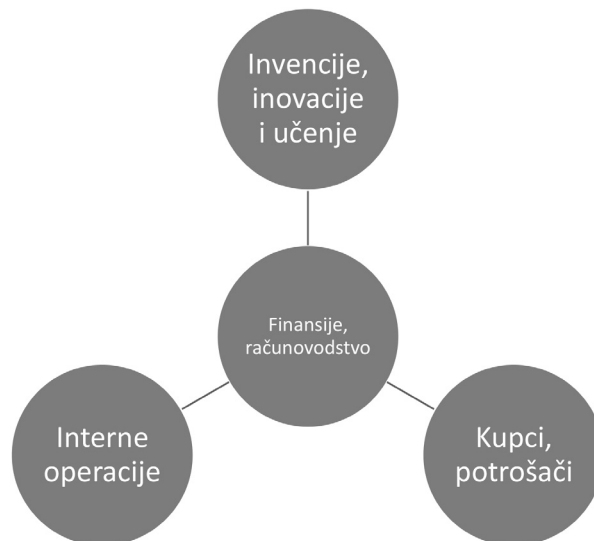
Dalje, iskristalisana su preimućstva preventivne kontrole u poređenju (komparaciji) sa naknadnom kontrolom. Naime, naknadna kontrola podrazumijeva mehanizam i postupke sakupljanja informacija o nadostacima nakon njihovog pojavljivanja (manifestovanja) i ovaj vid kontrole odvija se istekom završetka radnih operacija, faza i (ili) etapa proizvodnog i (ili) uslužnog procesa. Međutim, momentom (trenutkom) prijema informacije, problem se već dogodio i uzrokovao štetu, havariju i (ili) gubitke. Kod mnogih aktivnosti, tvrdi se, kontrola nakon završetka procesa je i jedino moguća, tj. razni kontrolni instrumenti stoje na raspolaganju menadžerskoj, poslovnoj strukturi poslije događanja deformacija i propusta. Ovim, moguće nije vršiti bitno poboljšavanje tekućeg poslovanja. Naknadna kontrola označava metod i sredstvo: budućeg planiranja i nagrađivanja, obučavanja, usavršavanja, dokvalifikovanja, prekvalifikovanja i dr. Mogu se eventualno i umanjiti već učinjene štete, gubici. Kontrola je i zakasnela. Narod kaže: „Poslije boja kopljem u trn“. Nužno je razvijati i jaku kompleksnu organizacionu kulturu.

Finansijska kontrola od posebnog je značaja u organizacijama. Obuhvata učinke svih djelatnosti privrednog subjekta iskazane u utrošcima, ili troškovima kao novčanim izrazom utrošaka. Postoje relevantne metode finansijske „racio“ i dr. analize.



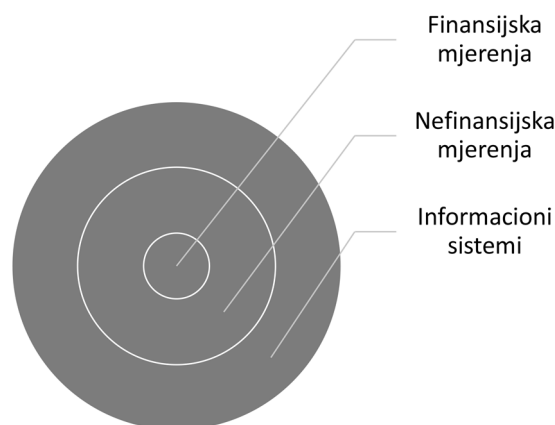
**Dijagram 3.** Činioci, elementi finansijskog stanja, analize u poslovnim organizacijama:

Formiraju se „budžeti“ tj. norme, standardi potrošnje raspoloživih izvora, resursa i prema njima moguće je kontrolisati potrošnju i mimoilaženje standardizovane i ostvarene potrošnje resursa. Normativi, standardi su kvantitativnih odrednica. Postoje i (ili) kvalitativna obilježja. Primjenjuju se i kriterijumi: 1. dodate ekonomske i 2. dodate tržišne vrijednosti. Pretpostavlja se, kod ovih mjerila, da organizacije i poslovno-tehnički sistemi angažuju investicioni kapital (od investitora) i povećavaju vrijednost ovog kapitala. Dodata ekonomska vrijednost označava mjerilo ekonomske vrijednosti ostvarene aktivnostima i djelatnostima koje subjekt, organizacija, vrši sopstvenim sredstvima, umanjimza uložene kapitalne investicije. Ovo je metod, način, kontrolisanja privrednih učinaka, rezultata i koncentriše se interes menadžera na postizanje stope povraćaja sredstava iznad vrijednosti i cijene kapitala. Pored ovog, kriterijum dodata tržišna vrijednost predstavlja finansijski mehanizam koji uključuje tržišnu stranu (dimenziju), jer se ovim instrumentom kvantifikuje (mjeri) ocijenjena i procijenjena vrijednost, prošlih i očekivanih investicionih programa i (ili) projekata pojedinog privrednog, poslovnog, subjekta na tržištu hartija od vrijednosti (tj. akcija) (5; 295-296). Ranije u (ovovremenoj) ekonomskoj teoriji postojala je druga kvalitativna i kvantitativna kategorija novostvorene vrijednosti (rada i stvorenog, viška vrijednosti).



**Dijagram 4.** Savršeniji sistem kontrole, ili „Balansirana lista mjerenja performansi“:

Potrebno je prethodno istaći da orijentisanost isključivo na jedan (bilo koji) elemenat kontrole sa zaobilaznjem drugih aspekata ne bi bila optimalna. Međutim i previše kontrolisanih činilaca može da dovede do stihijnosti, jer nije moguće i uspješno kontrolisati sve poslovne, tokove (efikasni subjekti, kontrolišu 3-4 procesa). Komparativno (uporedno), tradicionalna, klasična, kontrola temelji se na finansijskim i računovodstveno-knjigovodstvenim aktivnostima, mjerama, postupcima, procedurama, tehnikama. Novijim vremenom (polovinom 90-ih god. prethodnog vijeka) primjenjuje se u teoriji i (ili) praksi navedeni sistem: „Balansirane liste mjerenja učinaka“. Ovaj sistem složeniji je i smatra se optimalniji za preobražaj koncepcije i strategije u aktivnosti i (ili) akcije; kao i kontrolu učinaka. Isto tako, ovaj sistem pretpostavlja da je: finansijska i nefinansijska kvantifikacija (izmjerljivost) segment informacionog sistema za sve nivoe organizacije, kao i radno angažovane. (5; 296). Moguća je i težišna kombinacija ovih sistema. Ali sistem: „Balansirane liste mjerenja performansi“ može biti i kompleksniji i razrađeniji, fokusiraniji, diverzifikovaniji i disperziraniji obuhvatom: toka cjeline proizvodnje i (ili) usluga i ključnih, bitnih i najvažnijih faktora i procesa ekonomije i ekonomike privrednih i društvenih subjekata.



**Dijagram 5.** Drugačiji aspekti, kontrolnog sistema „Balansirane liste mjerenja učinaka“:

Stremi se razvijanju cjelovitog efikasnog i efektivnog sistema kontrole (4). Potrebno je utvrditi selektivno principe, načela, kontrolisanja koji mogu biti težišni i multidimenzionalni (zasnovanost na planovima, ciljevima, zadacima; pravovremenost; objektivnost i realnost; tačnost, jasnost, preciznost, egzaktnost; produktivnost, rentabilnost, ekonomičnost; fleksibilnost i prilagođenost; fokusiranost na strategijskim tačkama, punktovima, pozicijama, lokacijama, povezano i sa taktičkim i operativnim, tekućim, postupcima; usklađenost sa upravljačko-rukovodećim, menadžerskim i preduzetničkim strukturama odlučivanja, mjestima, poslovima; adaptabilnost organizacionom modelu, sa ovlašćenjima, obavezama i odgovornostima, u relevantnim privrednim, ili društvenim subjektima, organizacijama, kao i ustanovama i dr.). (5; 297).

Kontrolna aktivnost izuzetno je bitna u svim privrednim i društvenim organizacijama čije odsustvo, ili neadekvatnost vodi u: poremećaje, ili stihiju, haos, anarhiju i „entropiju“ sistema. Bitniji je predmet kontrole i kvantifikacije u odnosu na načine mjerenja, ali i sa povezanim značajem! Kontrola je neophodna kontinuelno i u društvenim ustanovama, kao npr: obrazovnim, zdravstvenim, kulturnim i dr. Stremi se osavremenjavanju postojećih sistema kontrole naročito u: kadrovskim, organizacionim, tehničko-tehnološkim, ekološkim i dr. aspektima. „Eko-kontrola“, od rastućeg je značaja!

### 3. KONTROLA I INFORMATIČKA PISMENOST

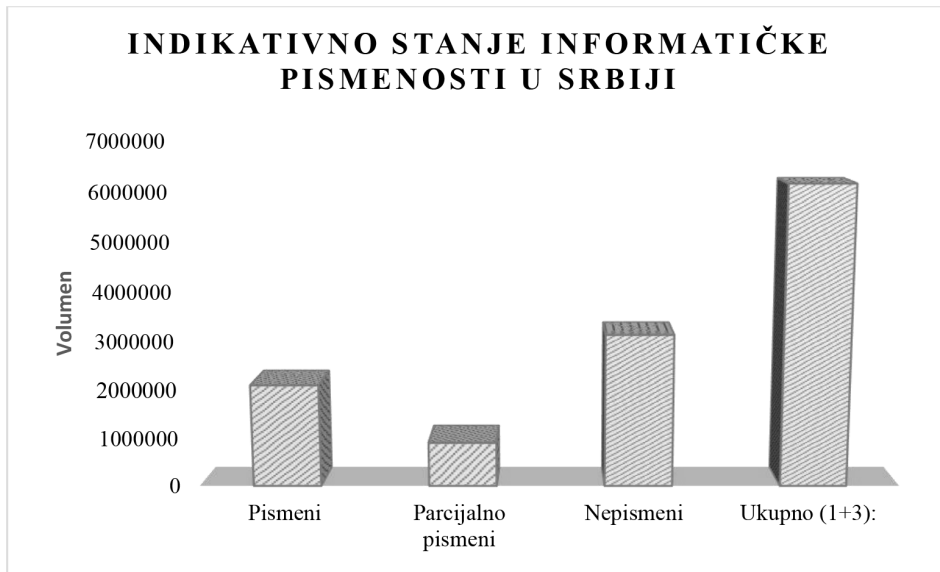
Kvalitetna, pouzdana, sistematska, kontrola povezana je sa strukom, obrazovanjem, kvalifikovanošću, postignućima informatičke, (kibernetске), pismenosti.

**Tabela 1.** Obim i struktura informatičke pismenosti, u Srbiji (popisom, u 2011.): (7; 43)

Elementi	Opseg	Struktura (%)
Pismeni	2.108.144	34,21
Parcijalno pismeni	910.586	14,78
Nepismeni	3.142.854	51,01
Ukupno (1+3):	6.161.584	100,00

Uočava se da u strukturi dominiraju informatički nepismena lica i ovo stanje racionalno je preobražavati u narednom periodu sa raznim, multiplikativnim, efektima.





**Grafikon 1.** Pokazatelji obima i formativne strukture, stanja informatičke pismenosti:

#### 4. ZAVRŠNE KONSTATACIJE

Procese i postupke kontrole optimalno je dalje izgrađivati, usavršavati, usklađeno sa zahtjevima i promjenama u nestabilnom i „turbulentnom“ privrednom, poslovnom okruženju. Postojeći sistemi kontrole su, ili usko fokusirani, ili su širi ali nedovoljno kristalisanih svih bitnih i težišnih faktora, imperativnog, kontrolnog procesa. Nužno je obuhvatati cjelinu proizvodnje i (ili) usluga, sa svim ključnim elementima upravljačkog, rukovodećeg, preduzetničkog, procesa. Kontrola, pored proizvodnih i ukupnih privrednih subjekata, moguća je i u društvenim ustanovama i administrativno-tehničkim i režijskim poslovima sa posebnim, specifičnim i specijalnim odrednicama. Isto tako, kontrola se javlja i na svim hijerarhijskim nivoima. Rastuća je uloga ekološke kontrole zagađivanja prirodne sredine i sa enormnim rizicima!

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# KAKOVOSTNA ŠOLA = ŠTUDENTJE Z VELIKO PRIDOBLENIMI KOMPETENCAMI

## QUALITY SCHOOL = STUDENTS WITH MANY ACQUIRED COMPETENCIES

Anton Vorina<sup>1</sup>

DOI:

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**Povzetek:** Prispevek prikazuje raziskavo o pridobljenih kompetencah študentov na Ekonomski šoli Celje, Višji strokovni šoli. Vzorec predstavlja 20 študentov, ki so končali študij na višji strokovni šoli v zadnjih 5 letih v programu Ekonomist, Organizator socialne mreže in Varovanje. Namen prispevka je prikazati, katere kompetence so študentje na šoli pridobili bolj za opravljanje dela v službi in katere manj. Ugotavljamo, da so študentje najmanj kompetenc pridobili na področjih "Znanje tujih jezikov", "Inovativnost" ter "Odločanje". So pa študentje ocenili, da so največ kompetenc dobili na področjih "Sposobnost vrednotenja lastnega dela", "Sposobnost učenja" ter "Socialne spretnosti" kot so spretnost vzpostavljanja in dobrih medsebojnih odnosov v delovnem okolju, uspešnega komuniciranja, reševanja konfliktov. Študentje si želijo, da bi pridobili še več znanja s področja tujih jezikov.

**Ključne besede:** kakovost, šola, kompetenca, študent.

**Abstract:** The paper presents a research about acquired competences of students at the Celje School of Economics, Vocational College. The sample represents 20 students who finished their studies at a vocational college within last 5 years in the program Economist, Social Network Organizer and Security. The purpose of the paper is to show which competences students have gained more in school for their work and less as well. We found out that students have acquired the least competencies in the fields of „Foreign language skills“, „Innovation“ and „Decision making“. However, the students assessed that they gained the most competences in the fields of „Ability to value their own work“, „Ability to learn“ and „Social skills“ such as the ability to establish and have good relationships in the work environment, successful communication, and conflict resolution. Students are wishing to gain even more foreign language skills.

**Keywords:** kakovost, šola, kompetenca, študent.

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### 1. UVOD

Neprestano razvijanje sposobnosti, spretnosti in znanj posameznika in posledično skupin, je v današnjem tekmovalnem in spreminjajočem se svetu ključnega pomena za obstoj in razvoj na trgu. Pritiski in spremembe so in bodo ostala del poslovnega okolja, kar pomeni, da se bo nadaljevala tudi potreba po razvoju novih kompetenc in spretnosti.

Kompetence v poslovnem okolju razumemo kot zmožnost organizacije, da nekaj proizvede, da se nečesa nauči ali se na primer nečemu prilagodi. Na ravni posameznika so kompetence ključne značilnosti in vedenja zaposlenih, ki so osnova za učinkovito delovanje v določeni organizaciji ali službi.

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V članku želimo odgovoriti na štiri raziskovalna vprašanja:

- Katere kompetence so študentje v času študija najbolj razvili in katere najmanj?
- Ali so študentje v času študija imeli zaposlitev in kako hitro so se zaposlili po končanju študija?
- Koliko let (povprečno) traja študij na Ekonomski šoli Celje, višji strokovni šoli?
- Katerih znanj, ki so potrebna na trgu dela, študentje niso pridobili v času študija?

## 2. KAKOVOST IN KOMPETENCE V VIŠJIH STRKOVNIH ŠOLAH

Višje strokovno izobraževanje dopolnjuje oziroma zaokroža ponudbo v terciarnem izobraževanju, postalo je njegov nepogrešljivi del. Čedalje pogosteje se tudi v Evropi poudarja nujnost takega izobraževanja, imenuje se tertiary short cycle education oziroma sub-degree level ali short cycle level =krajše terciarno izobraževanje ([http://www.mizs.gov.si/si/delovna\\_podrocja/direktorat\\_za\\_srednje\\_in\\_visje\\_solstvo\\_ter\\_izobrazevanje\\_odraslih/visjesolsko\\_izobrazevanje/](http://www.mizs.gov.si/si/delovna_podrocja/direktorat_za_srednje_in_visje_solstvo_ter_izobrazevanje_odraslih/visjesolsko_izobrazevanje/)).

Višje strokovno izobraževanje traja 2 leti in je najbolj povezan študij s prakso, saj morajo študentje v času dveletnega študija opraviti tudi 800 ur praktičnega dela v podjetju.

Kompetenco definiramo kot celoto vedenjskih vzorcev, ki jih mora posameznik obvladovati, če želi uspešno in učinkovito opravljati zaupano delo (Škafar, 2007).

Kompetenca je zmožnost opraviti neko nalogo, nekompetenca pa nasprotno. Kompetence vključujejo: obvladovanje pojmov, znanj, spretnosti, veščin, socialnih odnosov, stališč, ravnanj, odnosa do samega sebe ([http://webcache.googleusercontent.com/search?q=cache:XkcBtaDRTecJ:www.zrss.si/docx/300611100555\\_geo\\_kompetence\\_in\\_znanja.docx+&cd=3&hl=sl&ct=clnk&gl=si](http://webcache.googleusercontent.com/search?q=cache:XkcBtaDRTecJ:www.zrss.si/docx/300611100555_geo_kompetence_in_znanja.docx+&cd=3&hl=sl&ct=clnk&gl=si)).

Kompetence so namreč vse sposobnosti uporabe znanja in druge zmožnosti, ki so potrebne, da nekdo uspešno in učinkovito in v skladu s standardi delovne uspešnosti, izvrši določeno nalogo, opravi delo ali odigra vlogo v poslovnem procesu (<http://www.dialogos.si/slo/storitve/svetovanje/model-kompetenc/kompetence/>).

Torej samo ustrezno kompetenten posameznik je lahko na svojem delovnem področju lahko uspešen posameznik. Kompetence bi lahko opredelili kot sposobnost posameznika, da aktivira, uporabi in poveže svoje zmožnosti pri delu, ki ga opravlja. Kontekst dela pa je pogojen s kompleksnostjo, raznovrstnostjo in nepredvidljivostjo situacij v poslovanju sleherne organizacije, pa naj gre to za javni ali pa realni sektor. Pri kompetencah gre predvsem za kadrovske vire v funkciji »kdo« in »kako«, ne pa zgolj »kaj« in »zakaj«. Navedimo primer. Natančnost, doslednost in disciplinarnost je kombinacija vrtilin, idealna za šefa računovodstva ali pa bančnega uslužbenca. Ali je ta vrtilina dobra za pesnika, umetnika ali kreativnega direktorja trženja v turizmu? Zagotovo ne, zato so pomembne kompetence, ki jih pridobimo tudi z delovnimi izkušnjami, delovnimi navadami in jih ne dobimo zgolj v šoli (Vorina, 2011).

Kociper in Vadnjal (2010), sta opravila zanimivo raziskavo o kompetencah podjetnikov, ki vodijo hitro rastoča podjetja. Kompetence podjetnikov, ki so nujne za preživetje in rast hitro rastočih podjetij so danes ena najbolj aktualnih raziskovalnih vprašanj. Za namen zbiranja podatkov sta izvedla kvalitativno raziskavo in sicer sta opravila 28 polstrukturiranih intervjujev s podjetniki, ki so v večini tudi ustanovitelji teh podjetij. Rezultati kažejo, da podjetniki, kot najpomemb-

nejšo kompetenco označujejo razumevanje potreb kupcev, ki ji sledijo vztrajnost, kreativno mišljenje, uspešna prodaja in zaupanje kupcev.

Zelo pomembno je tudi, da študentje razvijajo IKT kompetence, saj so raziskovalci (Vorina, David, Vukotić, 2013) ugotovili, da obstaja statistično pomembna pozitivna povezanost med razvitostjo IKT kompetenc in motiviranostjo pri delu.

### 3. RAZISKAVA, METODE DELA, VZOREC

V letu 2019 smo se na šoli odločili, da povprašamo študente, ki so zaključili študij, o pridobljenih kompetencah v času študija. Vprašalniki o pridobljenih kompetencah so bili poslani »online« 50 študentom, od tega jih je odgovorilo v času od 22. 5. 2019 do 29. 5. 2019 samo 20.

V anketi je sodelovalo 6 moških oziroma 30 % vseh anketirancev in 14 žensk oziroma 70 % vseh anketirancev. Povprečna starost anketirancev je znaša 28,50 let, standardni odklon pa 6,5 let. Redno je študiralo 10 anketirancev oziroma 50 % vseh anketirancev, izredno pa tudi 10 anketirancev oziroma 50 % vseh anketirancev.

### 4. UGOTOVITVE RAZISKAVE-ODGOVORI NA RAZISKOVALNA VPRAŠANJA

Prvo raziskovalno vprašanje se glasi: Katere kompetence so študentje v času študija najbolj razvili in katere najmanj? Pridobljenost osemnajstih vrst kompetenc smo merili na Likertovi lestvici z ocenami 1 - sploh ne; 2 – malo; 3 – delno; 4 – precej; 5 - zelo veliko, kar prikažemo v tabeli 1.

**Tabela 1:** Pridobljene kompetence-povprečne vrednosti in standardni odklon

Kompetenca	N	Povprečje	Std. odklon
[Znanje tujih jezikov]	20	3,58	0,961
[Inovativnost]	20	3,63	0,895
[Odločanje]	20	3,68	0,749
[Spretnosti vodenja drugih]	20	3,68	0,885
[Sposobnost analize in sinteze]	20	3,74	0,872
[Podjetno razmišljanje]	20	3,79	0,713
[Sposobnost raziskovanja]	20	3,79	0,855
[Sposobnost pridobivanja in obdelave informacij iz različnih virov]	20	3,84	0,765
[Sposobnost uporabe znanja v praksi]	20	3,84	0,958
[Prilagodljivost]	20	3,84	0,688
[Sodelovanje v skupini, timu]	20	3,89	0,809
[Znanje uporabe sodobne informacijsko komunikacijske tehnologije]	20	3,89	0,809
[Teoretično strokovno znanje]	20	3,89	0,737
[Spretnost za organizacijo lastnega dela]	20	3,95	0,705
[Pisna in ustna komunikacija v slovenskem jeziku]	20	3,95	0,781
[Sposobnost vrednotenja lastnega dela]	20	4,00	0,745
[Sposobnost učenja]	20	4,00	0,816
[Socialne spretnosti (uspešno komuniciranje, reševanje konfliktov...)]	20	4,21	0,855

**Vir:** Lastna raziskava, 2019

Iz tabele 1 ugotovimo, da so študentje, v času študija, najmanj kompetenc pridobili na področju [Znanje tujih jezikov], [Inovativnost] in [Odločanje], največ kompetenc pa so dobili na področjih [Socialne spretnosti; spretnost vzpostavljanja in dobrih medsebojnih odnosov v delovnem okolju, uspešnega komuniciranja, reševanja konfliktov], [Sposobnost učenja] in [Sposobnost vrednotenja lastnega dela].

Drugo raziskovalno vprašanje se glasi: Ali so študentje v času študija imeli zaposlitev in kako hitro so se zaposlili po končanju študija? Študente smo povprašali, ali so v času študija imeli zaposlitev, kar prikazemo v tabeli 2.

**Tabela 2:** Rezultati o opravljanju dela v času študija

Vrsta zaposlitve v času študija	Frekvenca	Procent
Bil/a sem zaposlen/a v drugem podjetju kot sedaj	4	20
Opravljal/a sem delo preko študentskega servisa	10	50
Opravljal/a sem pogodbeno/priložnostno delo	1	5
Nisem opravljal/a dela oz. bila zaposlen/a	4	20
Skupaj	19	95
Manjkajoči	1	5
Skupaj	20	100

Vir: Lastna raziskava, 2019

Iz tabele 2 ugotovimo, da je med študijem 50 % študentov opravljal delo preko študentskega servisa, 20 % jih je bilo zaposlenih v drugem podjetju kot sedaj, 20 % študentov pa ni opravljal nobenega dela oziroma niso bili zaposleni.

**Tabela 3:** Rezultati o pridobitvi zaposlitve po končanem študiju

Čas zaposlitve po zaključku študija	Frekvenca	Procent
Takoj po diplomi	4	20
Od šest do dvanajst mesecev po diplomi	1	5
Nad dvanajst mesecev po diplomi	1	5
Bil sem zaposlen/a že med študijem	4	20
Še vedno nisem zaposlen/a	9	45
Skupaj	19	95
Manjkajoči	12	15
Skupaj	80	100

Vir: Lastna raziskava, 2019

Iz tabele 3 ugotovimo, da se je takoj, po opravljeni diplomi oz. zaključku študija, zaposlilo 20 % študentov, od šest do dvanajst mesecev po diplomi pa se je zaposlilo 5 % študentov. 20 % študentov je bilo že zaposlenih v času študija, po enem letu po dokončanju študija pa se je zaposlilo 5 % študentov. Še vedno pa zaposlitve ni imelo 45 % študentov.

Tretje raziskovalno vprašanje se glasi: Koliko let (povprečno) traja študij na Ekonomski šoli Celje, višji strokovni šoli? Študente smo povprašali, kdaj so začeli s študijem in kdaj so ga zaključili, kar prikazemo v tabeli 4.

**Tabela 4:** Povprečni čas študija

Način študija	Povprečje	N	Std. odklon
Redni študij	3,30	10	1,49
Izredni študij	2,60	10	0,70
Skupaj	2,95	20	1,19

Vir: Lastna raziskava, 2019

Tabela 4 prikazuje, da je povprečno redni študij trajal 3,30 let, izredni študij pa 2,60 let. Celotno povprečje študija znaša 2,95 let, standardni odklon pa 1,19 let.

Zadnje raziskovalno vprašanje se glasi: Katerih znanj, ki so potrebna na trgu dela, študentje niso pridobili v času študija? Študente smo povprašali, katerih znanj, ki so potrebna na trgu dela, niso pridobili v času študija, kar prikažemo v tabeli 5.

Iz tabele 5 je razvidno, da si študentje zelo želijo, da bi v času študija pridobili znanja s področja tujih jezikov in še več pouka, ki temelji na praktičnih primerih.

**Tabela 5:** Ne-pridobljena znanja v času študija

Katerih znanj, ki so potrebna na trgu dela, niste pridobili v času študija?	Frekvenca	Procent
Tuj jezik-angleščina in nemščina	3	33,33
Še več praktičnega znanja-pouka	2	22,22
Iznajdljivost	1	11,11
Prodajnih sposobnosti	1	11,11
O vzgoji.	1	11,11
Osebno trženje-samopromocija.	1	11,11
Skupaj	9	100,00

**Vir:** Lastna raziskava, 2019

## ZAKLJUČEK

Znanje v poslovnem svetu hitro zastara. Nenehno se srečujemo z novimi tehnologijami in delovnimi procesi, ki krepijo timsko delo, se vse bolj usmerjajo v storitveno dejavnost in je vedno več stikov s strankami, zato je treba znati več, kot le brati, pisati, računati in imeti določeno znanje tehničnih veščin. »Kompetence, nekoč že uveljavljene, potem že skoraj pozabljene, so znova aktualne – vračajo se v podjetja in organizacije, pa tudi v izobraževanje.

Ugotavljamo, da bo potrebno v prihodnje še več pozornosti namenjati pridobivanju kompetenc študentov na področju znanja tujih jezikov in prodajnih sposobnosti.

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**PRIMERJAVA ANALIZE STROŠKOV,  
KI JIH IMA ŠTUDENT Z OPRAVLJANJEM CENOVNO  
NAJUGODNEJŠEGA ŠOFERSKEGA IZPITA  
V SLOVENIJI, SRBIJI IN AVSTRIJI**

**COMPARISON OF COST ANALYSIS  
FOR MOST FAVOURABLE CONDUCTING OF DRIVING TEST  
FOR STUDENTS IN SLOVENIA, SERBIA AND AUSTRIA**

**Darko Pirtovšek<sup>1</sup>**

DOI:

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**Povzetek:** *Avtor se v svojem prispevku ukvarja s primerjavo stroškov, ki jih ima študent z opravljanjem šoferskega izpita v Sloveniji, Srbiji in Avstriji, če bi izkoristil najcenejšo možnost opravljanja le-tega. Pri tem se je avtor prispevka omejil, zaradi lažje analize, le na avtošole v glavnih mestih izbranih držav. Avtor je najprej želel ugotoviti, katera avtošola v posameznih glavnih mestih ponuja najcenejše pogoje opravljanja šoferskega izpita. Na podlagi pridobljenih podatkov se je za vsako državo izbral najcenejši ponudnik, ki je bil v nadaljevanju raziskave predmet same analize. Da bi bili pridobljene primerjave analize stroškov čim bolj realne, so bili stroški opravljanja najcenejšega šoferskega izpita v posameznih državah primerjani s povprečno državno štipendijo, ki jo ima študent v teh državah. Sama analiza raziskave pridobljenih podatkov je pokazala, da ima realno najvišje stroške opravljanja šoferskega izpita študent v Srbiji, dočim so le-ti v Sloveniji in Avstriji zelo podobni.*

**Ključne besede:** *šoferski izpit, študent, glavno mesto, stroški, povprečna državna štipendija, analiza*

**Abstract:** *In his paper, the author deals with the comparison of the costs for a student in passing a driving test in Slovenia, Serbia and Austria, should he use the cheapest opportunity to do so. In order to facilitate the analysis the author has limited the research to driving schools in the capitals of the countries chosen. The author first wanted to establish which driving school offers the keenest prices for conducting a driving test. On the basis of the data obtained he then chose the cheapest driving school in each country and used it as a data parameter. In order to make the cost analysis comparisons as realistic as possible, the cost of taking the cheapest driving test in each country was compared to the average national scholarship a student has in those countries. The analysis of the data obtained from the survey itself showed that the student in Serbia has the highest costs of passing the driving test, on the other hand they are very similar in Slovenia and Austria.*

**Keywords:** *driving test, student, capital, cost, average national scholarship, analysis*

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## 1. UVOD

Ko je v štiridesetih letih prejšnjega stoletja ameriški psiholog Abraham Maslow človekove potrebe razdelil v pet skupin, je v najnižjo skupino (osnovne fiziološke potrebe) postavil potrebe po hrani, pijači, toploti, obleki...[1] Sam se s svojimi študenti rad pošalim, da bi v sedanjem svetu v to skupino osnovnih potreb spadale potrebe po internetu, pametnem telefonu ipd. Vsekakor pa je ena od sedanjih osnovnih potreb zagotovo potreba po opravljenem šoferskem

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<sup>1</sup> ŠCC - Višja strokovna šola, Celje, Slovenija

izpitu. Težko si še lahko predstavljamo, da pri svojem opravljanju službe ne bi potrebovali (vsaj občasno) osebnega vozila.

Čeprav se lahko v Sloveniji opravi šoferski izpit z dopolnjenimi 18. leti (teoretični in praktični del usposabljanja se lahko opravlja že prej), se večina mladine odloči, da bo šoferski izpit, če nadaljuje šolanje, opravila v času svojega študija. Ker stroški opravljanja šoferskega izpita niso zanemarljivi, me je zanimalo, koliko le-ti znašajo v Ljubljani, glavnem mestu Slovenije, kjer tudi študira največji delež vseh študentov. Zaradi same narave mednarodne znanstvene konference LIMEN 2019<sup>2</sup>, kateri je prispevek tudi namenjen, sem se odločil, da bom izvedel primerjavo stroškov opravljanja šoferskega izpita med tremi glavnimi mesti – Ljubljana, Beograd, Dunaj.

Pri pridobivanju podatkov, povezanih s stroški opravljanja šoferskega izpita, sem upošteval minimalne zakonske predpise, ki jih predpisujejo posamezne izbrane države. Vsebinsko so si le-ti v vseh treh državah zelo podobni. Tako mora kandidat v vseh treh državah opraviti tečaj iz rdečega križa, preden pa prične z urami vožnje, mora opraviti izobraževanje in izpit iz teorije ter zdravniški pregled. Ko kandidat opravi minimalno zahtevano število ur vožnje, lahko pristopi k izpitni vožnji [2], [3], [4].

Je pa Avstrija nekoliko specifična glede izvedbe praktičnega usposabljanja šoferskega izpita. V Avstriji kandidat opravlja t. i. večfazno (dvofazno) praktično usposabljanje. To pomeni, da mora kandidat, po uspešno opravljenem šoferskem izpitu (prva faza), opraviti še drugo fazo praktičnega usposabljanja v roku enega leta, ki je sestavljena iz treh delov: preizkus popolnosti vožnje – prvi del (rok 2 - 4 mesecev), usposabljanje za varno vožnjo (rok 3 – 9 mesecev) in preizkus popolnosti vožnje – drugi del (rok 6 – 12 mesecev) [5]<sup>3</sup>.

Razlike se pojavijo tudi pri številu minimalno predpisanih ur pri teoretičnem in praktičnem izobraževanju. Vse te minimalne zakonske predpise sem v nadaljevanju tudi upošteval pri sami izvedbi in analizi raziskave, s katero sem želel ugotoviti, v katerem glavnem mestu opravi študent najceneje šoferski izpit.

## 2. IZVEDBA RAZISKAVE

Sam namen v moji raziskavi je bil, torej, ugotoviti, v katerem glavnem mestu izbranih držav so stroški opravljanja šoferskega izpita za študenta realno najnižji. Namreč, nominalno se stroški v posameznih izbranih državah med seboj zelo razlikujejo, zato je potrebno pri sami primerjavi le-teh upoštevati tudi življenjski standard, ki ga imajo prebivalci teh držav. Kot je že bilo omenjeno v uvodu, sem se pri sami raziskavi omejil na avtošole glavnih mest izbranih držav. Na podlagi pridobljenih podatkov, ki so bili dostopni<sup>4</sup>, sem naredil za vsako glavno mesto primerjavo stroškov opravljanja šoferskega izpita med posameznimi avtošolami, da sem nato lahko izbral tisto avtošolo, ki je študentom cenovno najugodnejša.

V Ljubljani, glavnem mestu Slovenije, je trenutno 46 avtošol, ki nudijo možnost opravljanja šoferskega izpita B kategorije [6]. Stroškom, ki ji zaračunavajo posamezne avtošole za svoje storitve (izvedba teoretičnega in praktičnega dela tečaja šoferskega izpita), sem prišel še doda-

<sup>2</sup> Glavni organizator konference je iz Srbije, konferenca se odvija v Avstriji (opomba avtorja prispevka).

<sup>3</sup> V Sloveniji mora voznik začetnik opraviti program dodatnega usposabljanja v 2 – 3 letih po opravljenem vozniskem izpitu, a le-ta, zaradi same časovne distance, ni upoštevan (opomba avtorja prispevka).

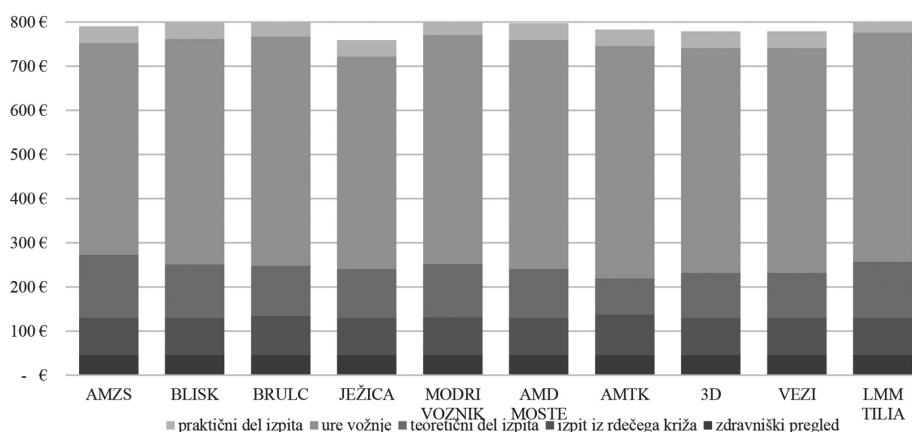
<sup>4</sup> Določene avtošole stroškov opravljanja šoferskega izpita nimajo objavljenih (opomba avtorja prispevka).

tne stroške za obveznosti, ki jih mora študent predhodno oz. naknadno opraviti, če želi pridobiti šoferski izpit – zdravniški pregled, izpit iz rdečega križa in praktični del izpita<sup>5</sup>. Najcenejši zdravniški pregled za šoferski izpit lahko študenti opravijo v Zdravstvenem domu za študente Univerze v Ljubljani, kjer le-ta stane cca. 45 € [7]. Izpit iz rdečega križa (tečaj prve pomoči + izpit) lahko študent opravlja na Rdečem križu Ljubljana, kjer le-ta stane cca. 84 € [8]. Določene avtošole, v sklopu opravljanja šoferskega izpita, tudi same ponujajo storitev opravljanja tečaja prve pomoči, vendar so stroški le-tega, po navadi, nekoliko višji. Praktični del izpita (velja tudi za teoretični del izpita<sup>6</sup>) opravijo študenti na Izpitnem centru Ljubljana, kjer za priglasitev le-tega plačajo cca. 38 € [9]. Pri praktičnem delu tečaja šoferskega izpita sem, seveda, upošteval minimalno število ur vožnje (20 ur), ki jih mora študent opraviti, da lahko pristopi k izpitni vožnji.

Ob pregledu skupnih stroškov, ki ji imajo študenti z opravljanjem šoferskega izpita pri posamezni avtošoli, sem za lažjo primerjavo le-teh, izmed vseh avtošol izbral 10, med katerimi sta tudi tako najcenejša kot tudi najdražja avtošola (tabela 1, slika 1). Vse preostale avtošole so znotraj tega intervala.

**Tabela 1:** Prikaz stroškov opravljanja šoferskega izpita v Ljubljani (avtorjev vir)

Avtošola	AMZS	BLISK	BRULC	JEŽICA	MODRI VOZNIK	AMD MOSTE	AMTK	3D	VEZI	LMM TILIA
zdravniški pregled	45 €	45 €	45 €	45 €	45 €	45 €	45 €	45 €	45 €	45 €
izpit iz rdečega križa	84 €	84 €	91 €	84 €	86 €	84 €	92 €	84 €	84 €	84 €
teoretični del izpita	143 €	122 €	112 €	112 €	122 €	112 €	82 €	102 €	102 €	127 €
ure vožnje	480 €	510 €	520 €	480 €	518 €	518 €	526 €	510 €	510 €	520 €
praktični del izpita	38 €	38 €	38 €	38 €	38 €	38 €	38 €	38 €	38 €	38 €
<b>Skupni stroški</b>	<b>790 €</b>	<b>799 €</b>	<b>805 €</b>	<b>759 €</b>	<b>808 €</b>	<b>797 €</b>	<b>783 €</b>	<b>779 €</b>	<b>779 €</b>	<b>814 €</b>



**Slika 1:** Prikaz stroškov opravljanja šoferskega izpita v Ljubljani (avtorjev vir)

Vidimo lahko, da ima študent najnižje skupne stroške opravljanja šoferskega izpita, če le-tega opravlja pri avtošoli Ježica (759 €) in najvišje, če šoferski izpit opravlja pri avtošoli LMM Tilia (814 €). Razlika med najdražjo in najcenejšo avtošolo ni zanemarljiva, saj znaša dobrih 7 %. Avtošola Ježica, kot najcenejša avtošola v Ljubljani, je bila nato tudi izbrana za nadaljnjo analizo same raziskave.

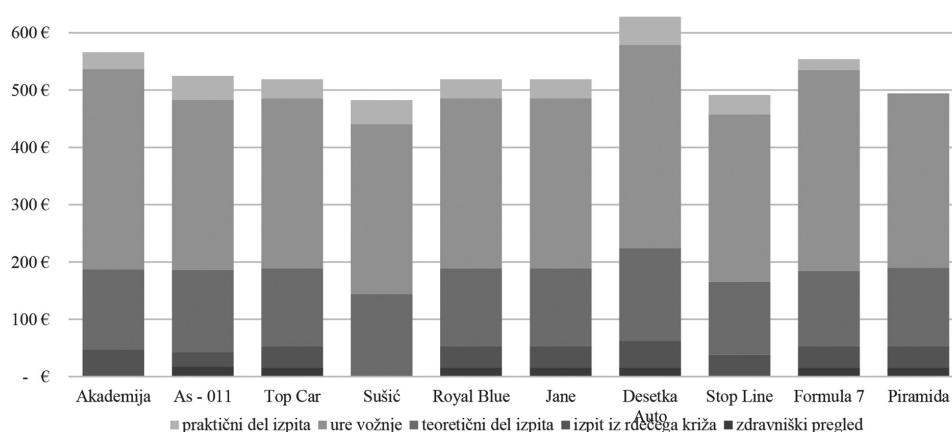
<sup>5</sup> Stroški za različne dodatne upravne takse v izbranih državah niso upoštevani (opomba avtorja prispevka).

<sup>6</sup> Stroški v višini 42 € so upoštevani v skupnem teoretičnem delu voznškega izpita (opomba avtorja prispevka).

V glavnem mestu Srbije, Beogradu, nudi možnost opravljanja šoferskega izpita B kategorije trenutno 120 avtošol [10]. Tudi tukaj sem stroškom, ki ji zaračunavajo posamezne avtošole za svoje storitve (izvedba teoretičnega in praktičnega dela tečaja šoferskega izpita), prištel še stroške za obveznosti, ki jih mora študent še dodatno opraviti za pridobitev šoferskega izpita – zdravniški pregled, izpit iz rdečega križa in praktični del izpita. Najceneje lahko opravijo študenti zdravniški pregled za šoferski izpit v Zdravstvenem domu Zemun, kjer le-ta stane 1.850 SRD (srbskih dinarjev) [11], pri čemer nekatere avtošole, če se študent odloči, da opravlja šoferski izpit pri njih, le-tega plačajo same. Izpit iz rdečega križa (tečaj prve pomoči + izpit) lahko študent opravlja na Zavodu Egzakta Medica (ob prijavi preko interneta) in stane 4.000 SRD [12]. Tudi pri opravljanju prve pomoči nudijo določene avtošole možnost opravljanja tečaja na svojem sedežu podjetja, pri čemer nekatere, za svoje kandidate, zato znižajo ceno samega tečaja (nekatere tečaj celo plačajo) ali pa, zaradi višje cene, nudijo dodatne ugodnosti pri opravljanju šoferskega izpita. Teoretični del izpita opravijo študenti na sedežih avtošol. Prijava za teoretični izpit, ki jo plačajo MUP-u (Ministarstvo unutrašnjih poslov), stane 2.500 SRD [13] in je že vračunana v skupne stroške izvedbe teoretičnega dela šoferskega izpita avtošol. Praktični del izpita opravijo študenti pred izpitno komisijo, sestavljeno iz članov avtošole in enega člana MUP-a [14]. Tudi prijava za praktični izpit MUP-u, ki znaša 2.800 SRD [13], je že prišteta k skupnim stroškom opravljanja praktičnega izpita, kjer so všteti še stroški avtošole, organizacije in izvedbe vožnje.

**Tabela 2:** Prikaz stroškov opravljanja šoferskega izpita v Beogradu (avtorjev vir)

Postavke stroškov / Avtošola	Akademija	As-011	Top Car	Sušić	Royal Blue	Jane	Desetka Auto	Stop Line	Formula 7	Piramida
zdravniški pregled	- €	17 €	15 €	- €	15 €	15 €	15 €	- €	15 €	15 €
izpit iz rdečega križa	47 €	25 €	38 €	- €	38 €	38 €	47 €	38 €	38 €	38 €
teoretični del izpita	140 €	144 €	135 €	144 €	135 €	135 €	162 €	128 €	131 €	136 €
ure vožnje	350 €	296 €	296 €	296 €	296 €	296 €	356 €	292 €	350 €	305 €
praktični del izpita	29 €	42 €	34 €	42 €	34 €	34 €	49 €	34 €	19 €	- €
<b>Skupni stroški</b>	<b>566 €</b>	<b>525 €</b>	<b>519 €</b>	<b>483 €</b>	<b>519 €</b>	<b>519 €</b>	<b>628 €</b>	<b>492 €</b>	<b>554 €</b>	<b>494 €</b>



**Slika 2:** Prikaz stroškov opravljanja šoferskega izpita v Beogradu (avtorjev vir)

Pri praktičnem delu tečaja šoferskega izpita sem zopet upošteval minimalno število ur vožnje (40 ur), ki jih mora študent opraviti, da lahko pristopi k izpitni vožnji. Za primerjavo stroškov opravljanja šoferskega izpita pri posameznih avtošolah sem med vsemi avtošolami <sup>7</sup> prav tako izbral 10 avtošol (tabela 2, slika 2), med katerimi sta tudi najcenejša in najdražja avtošola. Stro-

<sup>7</sup> Kar nekaj avtošol nima svojih spletnih strani oz. nimajo objavljenih cenikov (opomba avtorja prispevka).

ški so, zaradi nadaljnje analize, preračunani v evre, pri čemer sem pri pretvorbi srbskih dinarjev v evre upošteval menjalni tečaj Narodne banke Srbije [15], ki je v začetku meseca julija znašal 1 EUR = 118,09 RSD.

Najnižje skupne stroške opravljanja šoferskega izpita imajo študenti pri avtošoli Sušić (483 €), ki je bila zato tudi izbrana za nadaljnjo analizo, najvišje pa pri avtošoli Desetka Auto (628 €). Če so v Ljubljani razlike v stroških opravljanja voznškega izpita med posameznimi avtošolami relativno majhne, pa to za Beograd ne velja. Zato ne čudi, da je tudi razlika med najdražjo in najcenejšo avtošolo zelo velika in znaša 30 %.

Na Dunaju, glavnem mestu Avstrije, imajo študenti možnost izbire opravljanja šoferskega izpita B kategorije med 48 avtošolami [16], kar je glede na velikost mesta, v primerjavi z Ljubljano in Beogradom, zelo malo<sup>8</sup>. Spet sem stroškom storitev, ki jih nudijo posamezne avtošole, prištel še stroške zdravniškega pregleda, izpita iz rdečega križa in praktičnega dela izpita. Stroški zdravniškega pregleda za šoferski izpit so zakonsko določeni in znašajo 35 € [17] Tečaj in izpit iz rdečega križa lahko študenti na Dunaju (Avstriji) opravljajo preko različnih ustanov kot so Rdeči križ Avstrije, Zeleni križ, različne zdravstvene ustanove (neodvisne, lokalne)...[18]. Najceneje ga lahko študenti opravijo pri zasebni reševalni službi SMD<sup>9</sup>, kjer zanj plačajo 60 € [19]. Teoretični del izpita opravijo študenti na sedežih avtošol, pri čemer je prijava na izpit v višini 11 € [20], ki jo plačajo državi, že vračunana v skupne stroške izvedbe teoretičnega dela šoferskega izpita avtošol. Tudi prijava na praktični del izpita v višini 60 € [20] je že vračunana v skupne stroške izvedbe praktičnega dela šoferskega izpita avtošol. Ob tem je potrebno še povedati, da veliko avtošol ponuja svojim kandidatom polaganje teoretičnega in praktičnega izpita brezplačno oz. so ti stroški že vračunani v skupne stroške tečaja šoferskega izpita.

**Tabela 3:** Prikaz stroškov opravljanja šoferskega izpita na Dunaju (avtorjev vir)

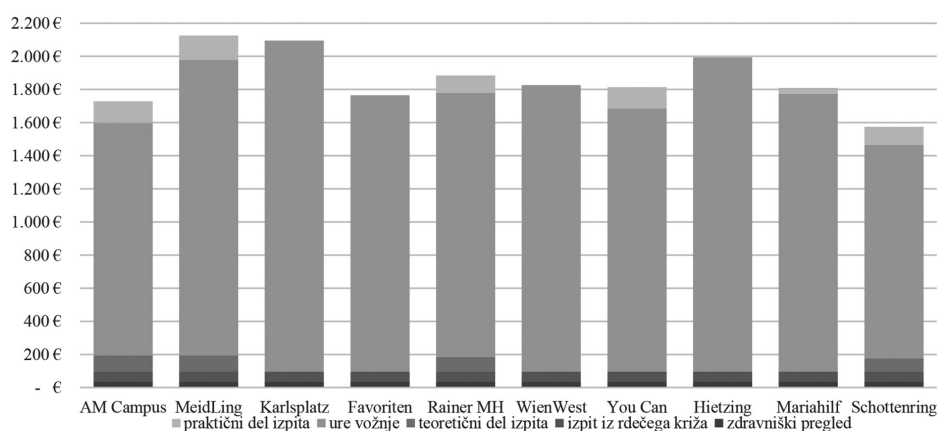
Postavke stroškov \ Avtošola	AM Campus	Meidling	Karlsplatz	Favoriten	Rainer MH	WienWest	You Can	Hietzing	Mariahilf	Schotterring
zdravniški pregled	35 €	35 €	35 €	35 €	35 €	35 €	35 €	35 €	35 €	35 €
izpit iz rdečega križa	60 €	60 €	60 €	60 €	60 €	60 €	60 €	60 €	60 €	60 €
teoretični del izpita	100 €	98 €	- €	- €	90 €	- €	- €	- €	- €	80 €
ure vožnje	1.404 €	1.785 €	2.000 €	1.670 €	1.595 €	1.732 €	1.589 €	1.900 €	1.680 €	1.290 €
praktični del izpita	130 €	148 €	- €	- €	105 €	- €	130 €	- €	35 €	109 €
<b>Skupni stroški</b>	<b>1.729 €</b>	<b>2.126 €</b>	<b>2.095 €</b>	<b>1.765 €</b>	<b>1.885 €</b>	<b>1.827 €</b>	<b>1.814 €</b>	<b>1.995 €</b>	<b>1.810 €</b>	<b>1.574 €</b>

Ker je praktični del tečaja šoferskega izpita v Avstriji sestavljen iz dveh delov, sem stroškom praktičnega dela izobraževanja, ki obsega minimalno 18 ur in jih mora študent opraviti, da lahko pristopi k izpitni vožnji, dodal še stroške, ki jih še ima študent po že opravljenem šoferskem izpitu. Stroški drugega dela tečaja (popolnost vožnje – prvi del, usposabljanje za varno vožnjo in popolnost vožnje – drugi del) znašajo cca. 300 € in ga lahko študenti opravijo pri pooblaščenih centrih varne vožnje in nekaterih avtošolah [21].

<sup>8</sup> Osebno mnenje avtorja prispevka.

<sup>9</sup> To je najnižja cena glede na pridobljene podatke avtorja prispevka.

Med izbranimi desetimi avtošolami (tabela 3, slika 3) imajo študenti najnižje stroške opravljanja šoferskega izpita pri avtošoli Schottenring (izbrana za nadaljnjo analizo), kjer le-ti znašajo 1.574 €, najvišje pa pri avtošoli MeidLing, kjer znašajo 2.126 €.

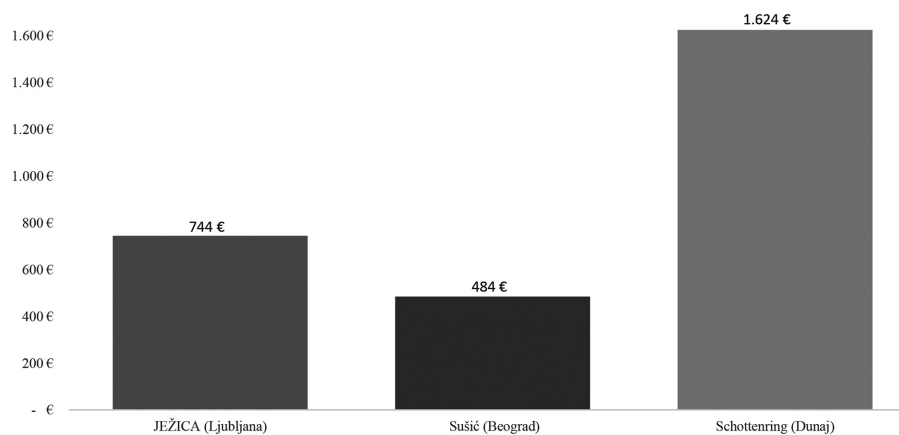


**Slika 3:** Prikaz stroškov opravljanja šoferskega izpita na Dunaju (avtorjev vir)

Tudi na Dunaju so razlike v stroških opravljanja šoferskega izpita med posameznimi avtošolami precejšnje, razlika med najdražjo in najcenejšo avtošolo pa je kar 35 %. V nadaljevanju bom na podlagi pridobljenih podatkov predstavil analizo raziskave ter podal ugotovitve le-te.

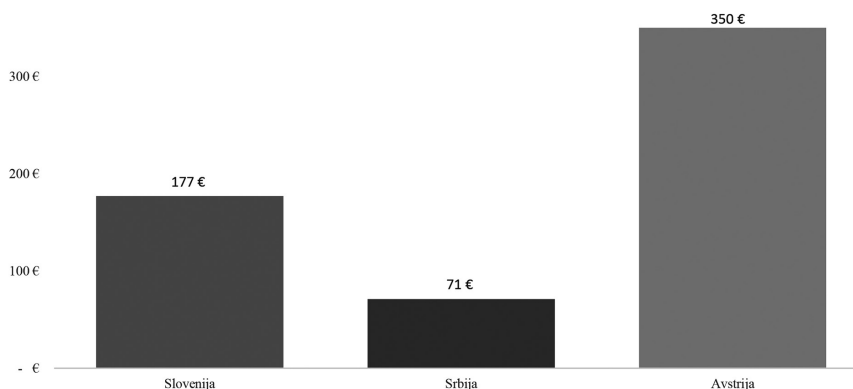
### 3. ANALIZA IN UGOTOVITVE RAZISKAVE

Že v uvodu prispevka sem poudaril, da sem s samo analizo raziskave želel ugotoviti, v kateri od izbranih držav je opravljanje šoferskega izpita za študente cenovno najugodnejše. Kot sem omenil že v prejšnjem poglavju, sem za izhodišče same analize izbral avtošole, ki so bile v posameznih glavnih mestih za opravljanje šoferskega izpita najcenejše (slika 4).



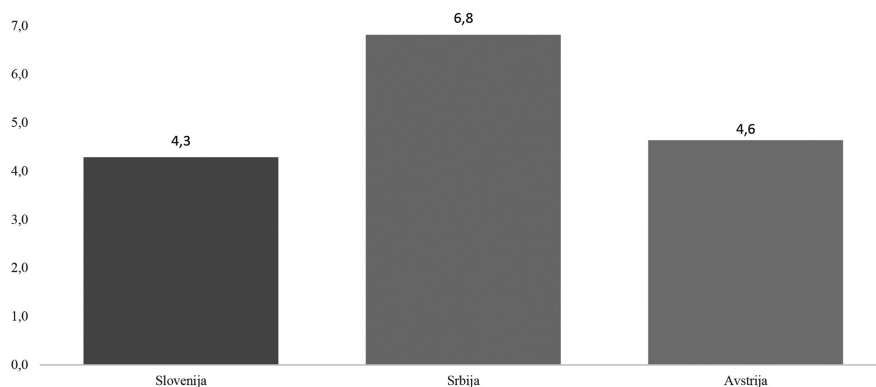
**Slika 4:** Primerjava stroškov najcenejših avtošol v izbranih glavnih mestih (avtorjev vir)

Če izbrane avtošole cenovno primerjamo med seboj, lahko takoj vidimo, da so nominalno med njimi precejšnje razlike, saj so stroški v izbrani avtošoli na Dunaju (Schottenring) od stroškov v izbrani avtošoli v Ljubljani (Ježica) višji za več kot 100 % (2,18-krat), v primerjavi z izbrano avtošolo v Beogradu (Sušić) pa za krepkih 200 % (3,35-krat). Seveda, nominalne razlike, po navadi, ne izražajo realnega stanja glede primerjave določenih stroškov, zato sem pridobljene stroške primerjal s povprečnimi državnimi štipendijami, ki jih imajo študenti v izbranih državah (slika 5).



**Slika 5:** Prikaz povprečni državnih štipendij v izbranih državah (avtorjev vir)

Iz grafa je razvidno, da se povprečne državne štipendije med seboj zelo razlikujejo. Tako znaša povprečna državna štipendija za študente v Avstriji 350 € [21] in je skoraj dvakrat (1,98-krat) višja kot v Sloveniji, kjer le-ta znaša cca. 177 € [22] ter skoraj petkrat (4,93-krat) višja kot v Srbiji, kjer je ta cca. 71 € [23]. Če sedaj primerjamo povprečne štipendije s stroški, ki jih ima študent z opravljanjem šoferskega izpita v izbranih državah, dobimo realne rezultate o tem, koliko le-ti znašajo (slika 6).



**Slika 6:** Prikaz potrebnega števila štipendij za opravljen šoferski izpit (vir: izračun avtoja)

Tako vidimo, da ima realno najvišje stroške z opravljanjem šoferskega izpita študent v Srbiji (Beograd), saj bo za plačilo le-tega porabil skoraj 7 svojih povprečnih štipendij, medtem ko bosta študenta v Sloveniji (Ljubljana) in Avstriji (Dunaj) porabila cca. 4,5 svoje povprečne štipendije. Torej so stroški opravljanja šoferskega izpita v Beogradu za študenta za cca. 55 % višji kot v Ljubljani in na Dunaju.

Od kod takšna razlika? Čeprav sem za svojo analizo izbral najcenejše avtošole v glavnih mestih in bi se pričakovalo, da bodo končni rezultati med seboj primerljivi (med Slovenijo in Avstrijo so) je glavni razlog te razlike v sami strukturi šoferskega izpita v posameznih državah. Najbolj bode v oči dejstvo, da je zahtevano število minimalnih ur vožnje pred opravljanjem praktičnega dela šoferskega izpita v Avstriji 18, v Sloveniji 20, v Srbiji pa kar 40 ur. Če bi nekoliko špekuliral in bi število obveznih ur vožnje v Srbiji zmanjšal na 20 ur, bi se stroški pri najcenejši avtošoli v Beogradu (Sušić) znižali na cca. 335 € oz. bi študent potrošil za plačilo šoferskega izpita cca. 4,7 povprečne državne štipendije, kar bi bilo povsem primerljivo z rezultatom Slovenije in Avstrije <sup>10</sup>.

Do podobnih ugotovitev sem prišel tudi pri primerjavi teoretičnih delov izobraževanja šoferskega izpita. V Avstriji obsega teoretični del izobraževanja 20 ur, v Sloveniji 24 ur, v Srbiji pa zopet

<sup>10</sup> Izračun avtorja prispevka.

40 ur. Ob ponovnem špekuliranju (zmanjšanju števila ur za polovico), bi se stroški pri najcenejši avtošoli v Beogradu (Sušić) dodatno znižali na cca. 263 €, kar bi za študenta pomenilo, da bi za šoferski izpit porabil manj kot 4 (cca. 3,7) povprečne državne štipendije oz. skoraj štipendijo manj kot študenta v Sloveniji in Avstriji <sup>11</sup>.

Ampak eno je teorija, drugo je praksa in na podlagi obstoječe zakonodaje, ki velja v izbranih državah, velja končna ugotovitev, da ima študent iz Srbije (Beograda), tudi ob upoštevanju najcenejše avtošole, realno najvišje stroške opravljanja šoferskega izpita.

#### 4. ZAKLJUČEK

V prispevku sem izvedel primerjavo analize stroškov opravljanja šoferskega izpita, ki jih imajo študenti v glavnih mestih Slovenije, Srbije in Avstrije, če bi za opravljanje le-tega izbrali najcenejšo avtošolo.

Zato sem najprej, na podlagi možnega izbora avtošol v glavnih mestih, pregledal cene vseh tistih avtošol, ki so bile javno objavljene in na podlagi pridobljenih podatkov izbral za vsako glavno mesto najcenejšo avtošolo. Ker se stroški posameznih izbranih avtošol med seboj ne morejo primerjati nominalno, sem v ta namen izvedel realno primerjavo s pomočjo povprečnih državnih štipendij za študente v izbranih državah.

Sama analiza je pokazala, da imajo, realno gledano, najvišje stroške opravljanja šoferskega izpita študenti v Beogradu (Srbiji), saj so le-ti višji za cca. 55 % od stroškov, ki jih imajo študenti v Ljubljani (Sloveniji) oz. na Dunaju (Avstriji). Glavni vzrok je predvsem v dejstvu, da je po srbski zakonodaji zahtevano število ur izobraževanja, tako v teoretičnem kot tudi v praktičnem delu, bistveno višje kot je to v Sloveniji in Avstriji.

Sam sem v prispevku uporabil za glavno variabla najcenejšo avtošolo. Ker je logično, da ni izvedljivo (na žalost), da bi lahko vsi študenti opravljali šoferski izpit pri najcenejši avtošoli, sam prispevek nudi možnost razširitve same raziskave na to, da se npr. uporabi za variabla povprečna cena opravljanja šoferskega izpita v posameznih glavnih mestih, kar bi, glede na precejšnje razlike v cenah med avtošolami predvsem na Dunaji in v Beogradu, lahko zelo vplivalo na razmerja stroškov<sup>12</sup>, podanih v mojem prispevku.

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<sup>11</sup> Izračun avtorja prispevka

<sup>12</sup> Osebna ugotovitev avtorja prispevka.



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# VREDNOTENJE BLAGOVNIH ZNAMK TRGOVCEV IN BLAGOVNIH ZNAMK PROIZVAJALCEV PERUTNINSKEGA MESA

## EVALUATION OF CUSTOMER TRADERS BRAND AND TRADEMARKS OF PRODUCERS OF POULTRY MEAT

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**Abstract:** *V prispevku nas je zanimalo koliko slovenski kupci poznajo blagovne znamke, katere poznajo in ali vrednotijo trgovske blagovne znamke višje kot blagovne znamke proizvajalcev perutninskega mesa. Nadalje nas je zanimalo, kako pogosto kupci kupujejo blagovne znamke in ali se raje odločajo za trgovske blagovne znamke ali za blagovne znamke proizvajalcev. Z neverjetnostnim in neslučajnostnim anketnim vprašalnikom, ki smo ga respondentom poslali preko spleta, smo zbrali podatke o zaupanju kupcev v blagovne znamke, pogostost nakupa izdelkov z blagovnimi znamkami ter lojalnost kupcev do blagovnih znamk. Zbrane podatke smo primerjali z demografskimi podatki kupcev ter jih analizirali glede na starost, prihodke, izobrazbo ter regijo. Z analiziranjem pridobljenih statističnih podatkov smo ugotovili, da kupci glede kakovosti prehrabnih izdelkov bolj zaupajo blagovnim znamkam proizvajalcev, glede cene pa blagovnim znamkam trgovcev.*

**Keywords:** *Blagovna znamka proizvajalca, blagovna znamka trgovca, kakovost blagovne znamke, zaupanje v blagovno znamko*

**Abstract:** *In the paper, we were interested in how well Slovenian customers know brands, which brands they know and if they value trade brands higher than the manufacturer's brands of poultry meat producers. Furthermore, we were interested in how often customers buy brands and whether they prefer trader's brands or manufacturer's brands. An online improbability and non-coincidence questionnaire was sent out, which gave us information about customer trust in brands, the frequency of purchases of branded products, and customer loyalty to brands. The data collected was compared with customer demographics data and analyzed by age, revenue, education and region. Analyzing the statistics, we have obtained that customers have more confidence in the quality of food products by the brands of manufacturers, and in terms of price, the brands of trader's.*

**Keywords:** *Manufacturer's brand, Trader's brand, Brand quality, brand trust*

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### 1. UVOD

Blagovne znamke so se pričele pojavljati v srednjem veku, ko so obrtniški cehi pričeli označevati svoje izdelke. Kupcem so tako želeli sporočiti, da njihov izdelek zagotavlja višjo kakovost od izdelkov drugih proizvajalcev. V času industrijske revolucije v začetku 20. stoletja so tovarne, ki so uvajale velikoserijsko proizvodnjo prevzemale vodilno vlogo na trgu zaradi nizkih cen. S povečevanjem števila tovarn, ki so proizvajale enake izdelke pa se je pojavil pomen diferenciacije

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izdelkov in proizvajalci so pričeli označevati svoje izdelke. Nastale so prve blagovne znamke. Z ustvarjanjem blagovnih znamk so proizvajalci želeli sporočiti kupcem, da jim njihov izdelek zagotavlja kakovost, ki je pri drugih kupcih ne bodo dobili. Z blagovno znamko so kupcem zagotavljali vrednost, ki jo plačajo z višjo ceno proizvoda ali storitve. Blagovna znamka potrošniku predstavlja bližnjico do informacij o izdelku ter zmanjšuje tveganje pri nakupu (Kotler, 1998).

V času, ko je informacijski sistem »podredil« mnoge potrošnike dobrin so postale blagovne znamke tudi bolj pomembne. IKT je generacijo milenijcev (generacije Y) ponesla v svet globalnega marketinga. Blago iz vseh koncev sveta je po letu 2000 zaradi tehnološkega razvoja logistike postalo dostopno kupcem v kratkem času. Tehnični, kozmetični, farmacevtski, tekstilni in drugi izdelki so postali dostopni širokemu krogu potrošnikov.

Z razvojem internetne prodaje se je povečala globalna ponudba mnogih izdelkov, ki jih je bilo moč kupiti le pri spletnih ponudnikih (Amazon, Alibaba, Google Shop, idr.). Ponudbe preko interneta so postajale vedno agresivnejše. S selitvijo proizvodnje izdelkov na trge s cenejšo delovno silo so mnoge korporacije pričele izdelovati izdelke, ki so cenovno konkurirali mnogim proizvajalcem s proizvodnjo v deželah z dražjo delovno silo. Korporacije so dosegale ogromne dobičke. Za povečevanje dobičkov pa so se poleg poceni delovne sile pričele posluževati tudi vse cenejših materialov za proizvodnjo svojih izdelkov. Poceni delovna sila in ceneni materiali pa so kupce vedno bolj razočarali zaradi njihove slabe kakovosti. Kupci so pričeli zopet posegati po izdelkih, ki so bili označeni z blagovnimi znamkami, ki so zagotavljale kakovost, kljub višjim cenam.

Zaradi vse večje odvisnosti trgovcev od blagovnih znamk proizvajalcev so pričeli trgovci v drugi polovici prejšnjega stoletja razvijati trgovske blagovne znamke. Če so trgovci prej oglaševali v svojih trgovinah izdelke blagovnih znamk proizvajalcev, so z razvojem lastne blagovne znamke v svojih trgovinah sedaj oglaševali blagovno znamko svoje trgovske organizacije. S pomočjo IK tehnologije imajo trgovci informacije o prodaji izdelkov, njihovi količini in njihovi donosnosti. Z razvojem lastne blagovne znamke so pričeli sklepati pogodbe s proizvajalci, ter med njimi ustvarjati konkurenco. Tako so lahko izbirali proizvajalce, ki so jim zagotavljali dovolj kakovostne izdelke z nižjo ceno s katero pa so privabili vedno več kupcev. Z zagotavljanjem ustrezne kakovosti za ugodno ceno so utrjevali pri kupcih svojo trgovsko blagovno znamko.

Konjunktura gospodarstva držav EU v zadnjem petletnem obdobju je omogočila zaposlencem rast njihovih prihodkov in povečala njihovo kupno moč. Posledično so trgovci zviševali prihodke tako s širjenjem ponudbe kakor s povečevanjem cen izdelkov. Trgovina pa se je razvijala hitreje kot proizvodni obrati, ki za povečevanje količine izdelkov potrebujejo nove sodobnejše proizvodne linije, ki pa pomenijo velike investicijske vložke. S konstantno rastjo prihodkov se je povečevala tudi moč trgovine. Z vztrajnim oglaševanjem so gradili svoje lastne trgovske znamke in jih ponujali kupcem pod ugodnejšimi pogoji. Trgovci so ponujali kupcem svoje blagovne znamke z oglaševanjem trajno nizkih cen, akcijskih cen in s cenovnimi popusti. Razlike v cenah so v večini primerov morali pokrivati proizvajalci – dobavitelji izdelkov.

## **2. BLAGOVNE ZNAMKE IN STANDARDI KAKOVOSTI**

Po mnenju managerjev so blagovne znamke največje premoženje podjetij (Konečnik, 2005 v Vukasović, 2012). Te dejstva pa se zavedajo tako managerji proizvodnih kot managerji trgovskih podjetij. Graditev blagovne znamke je dolgotrajen proces, ki mora biti strateško odlično pripravljen in zahteva mnogo finančnega in strokovnega vlaganja v proces načrtovanja in ra-

zvoja blagovne znamke. Izdelek, skupina izdelkov ali storitev, ki predstavlja blagovno znamko mora ciljni skupini kupcev zagotavljati kakovost, privlačnost, razpoložljivost in ugodno ceno. Kupci morajo ob nakupu izdelka, ki ga označuje blagovna znamka začutiti zadovoljstvo, blagovna znamka pa si mora pridobiti njihovo zaupanje (Kapferer, 1992).

Za pridobitev zaupanja pri kupcih so proizvajalci razvili kontrolo kakovosti s katero zagotavljajo kupcem, da bodo z nakupom njihovega izdelka kupili vedno enako kakovost. Za diferenciacijo izdelkov na trgovskih policah so pričeli izdelke označevati z oznako standarda po katerem so izdelki narejeni. Tako so v živilski industriji podjetij EU nastali standardi HACCP in ISO s katerim so proizvajalci zagotavljali kakovost prehrabnih izdelkov. Ker pa so bili ti standardi nekoliko različni v vsaki članici EU, so tudi trgovci razvili lastne standarde pod katerimi so sprejemali blago in so jih morali zagotavljati dobavitelji. Nastali so standardi IFS, BRC, Global G.A.P. in še nekateri, ki so jih zahtevala trgovska podjetja od dobaviteljev.

Zaradi vse večje osveščenosti kupcev v EU so tako proizvajalci kot trgovci pričeli oglaševati izdelke, ki sporočajo kupcem, da se le-ti ne proizvajajo na področju, kjer podjetja izkoriščajo za proizvodnjo otroke, zapornike, invalide in delajo za skromen zaslužek v neprimernih razmerah. Prav tako se označujejo izdelki s poreklom, ki sporoča, da so vzrejeni ali pridelani v domačih okoliških kmetijah (Kupujmo Slovensko, Slovensko poreklo, ...). Trgovci označujejo uvožene izdelke na svojih policah s poreklom iz ekološko prijaznih proizvajalcev (Non-Amazon, GMO-free, idr.).

Za kontrolo kakovosti blagovne znamke proizvajalca v proizvodnih podjetjih skrbijo lastni interni oddelki kontrole, ki pa jih po pravilniku presojajo občasno tudi zunanje strokovne organizacije. Za kontrolo blagovne znamke trgovca pa poleg kontrole proizvajalca skrbi še služba kontrole kakovosti trgovca, ki lahko nenajavljena kadarkoli pride v kontrolo proizvajalca. S takšnim načinom kontrole lahko trgovec zagotavlja kupcem vedno enako kakovost izdelka, ki je proizveden pod njihovo blagovno znamko trgovca in s tem gradi njihovo zadovoljstvo in zaupanje.

### **3. BLAGOVNA ZNAMKA PROIZVAJALCA VS BLAGOVNA ZNAMKA TRGOVCA**

Konec prejšnjega stoletja so se razvile diskontne prodaje, kjer so kupci kupovali cenejše izdelke nižje kakovosti. Z zagotavljanjem minimalnih standardov pa so tudi ti izdelki po kakovosti vztrajno dohitevali izdelke, ki so se prodajali v supermarketih in pod blagovnimi znamkami. Če še pred dvema desetletjema v diskontnih trgovinah skoraj praviloma ni bilo blagovnih znamk proizvajalcev jih je danes že enako število kot v nediskontnih trgovinah. Širitev diskontnih trgovin na območje držav članic EU je povzročila njihovo rast tako po številu kakor po prometu, ki ga ustvarjajo. Mnogi diskonti so si zato tudi že ustvarili lastne trgovske blagovne znamke. V Sloveniji diskonterji Aldi, Hofer, Lidl, Eurospin že močno konkurirajo »rednim« trgovcem, kot so Mercator, Špar, Tuš, Jager in drugi.

### **4. NAMEN RAZISKAVE**

V prispevku nas je zanimalo kako blagovne znamke ocenjujejo kupci v slovenskih trgovinah. Z anketnim vprašalnikom, ki smo ga poslali preko interneta smo želeli izvedeti, katere blagovne znamke od najbolj razširjenih v Sloveniji poznajo kupci. Za analiziranjem dobljenih odgovorov smo ocenjevali ali kupci bolj zaupajo blagovnim znamkam proizvajalcev ali blagovnim znamkam trgovcev glede na njihovo kakovost in ceno. Nadalje nas je zanimal način izbiranja blagovnih znamk in zvestoba kupcev do blagovnih znamk.

## 5. CILJ RAZISKAVE

Z ustreznimi statističnimi metodami raziščemo, ali so podatki statistično značilni in dovolj zanesljivi, da jih lahko posplošim na celotno populacijo raziskovane države. Z odgovori respondentov pridobljene rezultate analiziramo in v komentarju navedemo, katere blagovne znamke so pomembnejše za kupce, kateri so odločujoči dejavniki za njihove odločitve in zakaj se tako odločajo.

Zanimalo nas je tudi, katere demografske skupine respondentov so bile najvplivnejše pri pridobivanju podatkov.

## 6. METODOLOGIJA

Z neverjetnostnim in neslučajnostnim anketnim vprašalnikom, ki smo ga poslali preko spleta respondentom smo zbrali podatke o zaupanju kupcev v blagovne znamke, pogostost nakupa izdelkov z blagovnimi znamkami ter lojalnost kupcev do blagovnih znamk. Zbrane podatke smo primerjali z demografskimi podatki kupcev, ter jih analizirali glede na starost, prihodke, izobrazbo ter regijo. Raziskava je namenjena doseganju rezultatov, ki so uporabni v snovanju praktične strategije trženja (Kavčič, 2007). Anketni vprašalnik smo poslali respondentom preko interneta, saj je to najhitrejša metoda za pridobivanje podatkov. V prispevku smo se držali pravila Ockhamove britve, ki narekuje, da ima preprostejši model vedno prednost pred zapletenejšim, vse dotlej, dokler se ne dokaže, da je zaradi tega neustrezen. Temeljna naloga ekonometrije je soočanje obstoječe ekonomske teorije z dejanskimi dogajanja ob uporabi metode statističnega sklepanja (Samuelson, 2002).

## 7. RAZISKAVA IN REZULTATI

V raziskavo smo vključil pet nominalnih spremenljivk in sicer : spol, izobrazbo, zakonski stan, status ter regijo v kateri prebivajo anketiranci.

Na vprašanje glede spola, izobrazbe, zakonskega stana, statusa ter regije prebivanja je odgovorilo 50 anketirancev. Anketo je izpolnilo 23 žensk, kar predstavlja 46,0 % anketiranih ter 27 moških, kar predstavlja 54,0 % anketiranih. Glede izobrazbene strukture med vsemi anketiranimi ženskami in moškimi skupaj prevladuje višješolska izobrazba in več (53%), srednja izobrazba (47,0 %). 48% anketiranih je poročenih, 46% anketirancev je samskih ter 6% anketirancev je razvezanih. Na vprašanje glede statusa prevladujejo aktivni oz. zaposleni, 58%. Prevladujejo anketiranci iz Savinjske regije, 51% anketiranih, 31% anketiranih je iz Podravske regije ter 6% anketiranih iz Osrednjeslovenske regije.

Kot numerične spremenljivke smo v raziskavo vključili starost in dohodek gospodinjstva. Starost anketirancev prevladuje v razredu med 21 in 40 let in sicer 50% anketiranih. 20% anketirancev je starih v razredu med 41 do 50 let. 14% anketiranih je starih v razredu med 51 in 60 let. Na vprašanje glede višine neto mesečnega dohodka je odgovorilo 50 anketirancev. 30% anketirancev imajo dohodek gospodinjstva nad 3.000 €, prav tako 30% anketirancev imajo dohodek v razponu nad 500 € in do 1.200 €, 16% anketirancev ima dohodek v razredu med 1.500 do 2.200 € ter 14% v razponu med 2.200 € do 3.000 €.

## 7.1. Odločanje kupcev o zaupanju, ceni in kakovosti med PBZ in TBZ

**Table 1.** Odločanje kupcev o zaupanju med PBZ in TBZ

Prosimo izberite, katerim blagovnim znamkam med prehrabnimi izdelki bolj zaupate.				
Odgovori	Frekvenca	Odstotek	Veljavni	Kumulativa
BZ proizvajalca (PBZ)	45	88%	88%	88%
BZ trgovca (TBZ)	6	12%	12%	100%
Skupaj	51	100%	100%	

Vir: Rezultati raziskave avtorjev

Iz Tabele 1 je razvidno, da 88% kupcev zaupa blagovnim znamkam proizvajalcev in le 12% zaupa blagovnim znamkam trgovcev.

**Table 2.** Odločanje kupcev o ceni med PBZ in TBZ

Prosimo izberite, katere blagovne znamke so po vaši oceni cenejše za enake prehrabne izdelke.				
Odgovori	Frekvenca	Odstotek	Veljavni	Kumulativa
BZ proizvajalca (PBZ)	16	31%	31%	31%
BZ trgovca (TBZ)	35	69%	69%	100%
Skupaj	51	100%	100%	

Vir: Rezultati raziskave avtorjev

Iz Tabele 2 je razvidno, da več kot 2/3 (69%) kupcev ocenjuje, da so blagovne znamke trgovcev cenejše od blagovnih znamk trgovcev.

**Table 3.** Odločanje kupcev o kakovosti med PBZ in TBZ

Prosimo izberite, katere blagovne znamke so po vaši oceni kakovostnejše za enake prehrabne izdelke.				
Odgovori	Frekvenca	Odstotek	Veljavni	Kumulativa
BZ proizvajalca (PBZ)	49	96%	96%	96%
BZ trgovca (TBZ)	2	4%	4%	100%
Skupaj	51	100%	100%	

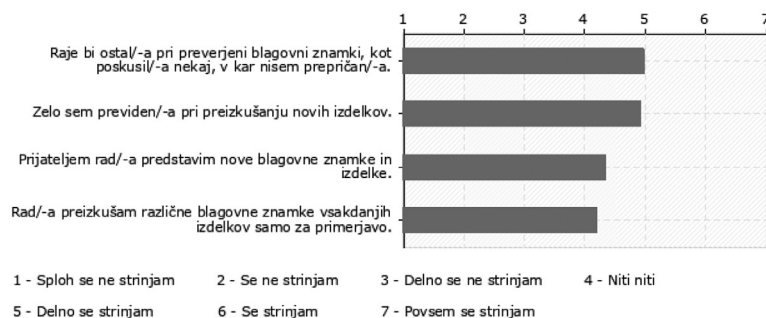
Vir: Rezultati raziskave avtorjev

Iz Tabele 3 je razvidno, da 96% kupcev ocenjuje, da so blagovne znamke proizvajalcev kakovostnejše od blagovnih znamk trgovcev.

## 7.2. Pripadnost kupcev do blagovnih znamk iz radovednosti.

Kot je razvidno iz Grafa 1 se največ kupcev strinja, da bi raje ostali pri preverjeni blagovni znamki. Z majhno razliko se strinjajo, da so zelo previdni pri preizkušanju novih izdelkov.

Prosimo, označite, v kolikšni meri se strinjate z naslednjimi trditvami. (n = 50)

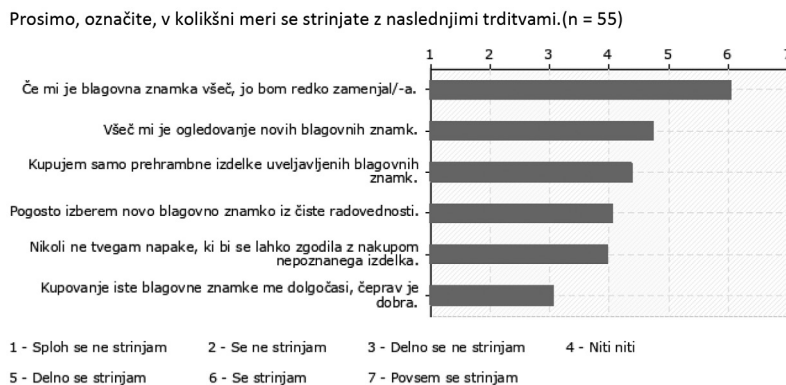


**Graf 1.** Pripadnost kupcev do blagovnih znamk iz radovednosti

Vir: Rezultati raziskave avtorjev

### 7.3. Pripadnost kupcev do blagovnih znamk zaradi všečnosti.

Iz Grafa 2 je razvidno, da bi kupci redko zamenjali blagovno znamko, če jim je všeč. Kljub temu, pa si radi ogledajo nove blagovne znamke. Ta rezultat sporoča lastnikom blagovnih znamk, da jih morajo vedno znova osveževati in urejati, da so kupcem privlačne in všečne.

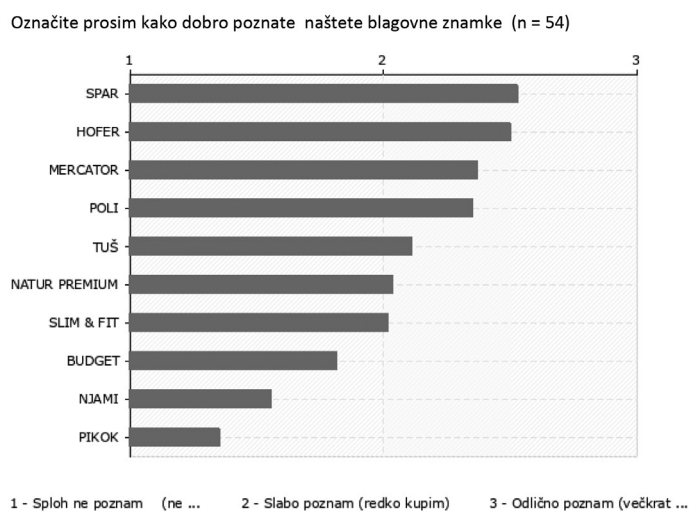


**Graf 2.** Pripadnost kupcev do blagovnih znamk zaradi všečnosti

Vir: Rezultati raziskave avtorjev

### 7.4. Poznavanje blagovnih znamk slovenskih trgovcev i proizvajalcev.

Kot prikazuje Graf 3 so po ocenah kupcev najbolj razpoznavne trgovske blagovne znamke Spar, Hofer in Mercator, sledijo Tuš, Budget in Pikok. Najbolj prepoznavna proizvajalčeva blagovna znamka Perutnine Ptuj Poli, ki je na četrtem mestu, sledijo Natur Premium, Slim & Fit in Njami.



**Graf 3.** Razvrstitev PBZ in TBZ po prepoznavnosti

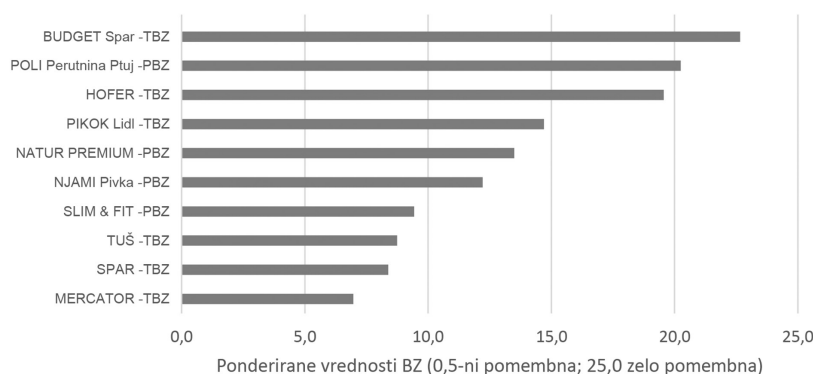
Vir: Rezultati raziskave avtorjev

### 7.5. Pomembnost blagovnih znamk slovenskih trgovcev i proizvajalcev.

Kupci so ocenili, da je za njih najbolj pomembna blagovna znamka Budget Spar, sledijo Poli, Hofer, Pikok, Natur Premium, Njami, Slim & Fit, Tuš, Špar in Mercator. Iz grafa je mogoče logično zaključiti, da so kupcem pomembne trgovske blagovne znamke zaradi ugodne (nizke) cene, proizvajalčeve blagovne znamke pa zaradi kakovosti.



Razvrstite blagovne znamke ki jih poznate po pomembnosti



**Graf 4.** Razvrstitev PBZ in TBZ po pomembnostii

**Vir:** Rezultati raziskave avtorjev

## 8. PRIHODNJE RAZISKAVE

Odrpto ostaja vprašanje, koliko časa in kako učinkovito še lahko proizvajalci s svojimi blagovnimi znamkami konkurirajo vedno bolj trženjsko agresivnim trgovskim blagovnim znamkam. Z longitudinalnimi periodičnimi raziskavami bi bilo mogoče ugotoviti katere BZ imajo trend upadanja, katere trend rasti, ter katere ostajajo stalnice na trgu in zakaj.

Raziskati bi bilo potrebno kako različna populacija glede na demografske podatke ocenjuje in razvršča obstoječe PBZ in TBZ v Sloveniji. Model, ki smo ga izdelali je zagotovo mogoče aplicirati tudi na druge države z zamenjavo domicilnih blagovnih znamk. Zanimiva bi bila tudi raziskava v mednarodnem prostoru za blagovne znamke, ki so prisotne v mednarodnem prostoru.

## 9. ZAKLJUČEK

Iz dobljenih podatkov raziskave lahko zaključujemo, da kupci bolj verjamejo blagovnim znamkam proizvajalcev glede kakovosti, glede cen pa so jim bolj pomembne blagovne znamke trgovcev. Trgovci zaradi vedno večje konkurence kupce privlačijo z ugodnejšimi cenami. Vedno nižje cene pa zahtevajo od dobaviteljev – torej od proizvajalcev, ki pa so primorani zniževati kakovost svojih izdelkov, da lahko pokrijejo stroške proizvodnje. Proizvajalci pa se lahko obdržijo na trgu le z zagotavljanjem kakovosti, ki jih zagotavljajo njihove blagovne znamke, zato pa morajo dosti sredstev vlagati v promoviranje in oglaševanje s katerima prepričujejo kupce, da ostajajo zvesti njihovim blagovnim znamkam.

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