

Varazdin Development and Entrepreneurship Agency  
in cooperation with  
Megatrend University  
University North  
Faculty of Management University of Warsaw  
Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat



# Economic and Social Development

41<sup>st</sup> International Scientific Conference on Economic and Social Development

## Book of Proceedings

Editors:

Aleksandra Tosovic – Stevanovic, Dragana Trifunovic, Alexander Maloletko



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# EXPERIENCE OF PRIVATIZATION AND PRIVATE CAPITAL ENTRY INTO PUBLIC COMPANIES

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## ABSTRACT

*After more than a decade and a half of experience in the privatization in the social sector in the Republic of Serbia, a gap between the publicly promoted expected effects and actual results achieved is getting more visible. More and more people agree with the estimates that this process was poorly conceived, realized in an unregulated institutional environment characterized by inconsistent laws and regulations, underdeveloped and non-transparent procedures and systemic corruption. The only possible result of such a process is inefficiency with a number of accompanying problems such as a drastic decrease in production and employment in privatised enterprises, social vulnerability of a large number of dismissed workers and more pronounced social layering. This paper analyzes and points out the most common mistakes made during the privatization process in the previous period, with the aim of not repeating them in the initiated procedure of privately owned capital entry into public enterprises, where potential problems may arise even further, having in mind their strategic importance for the Serbian economy and all citizens.*

**Keywords:** *privatization, sale, bankruptcy, social insecurity, unemployment*

## 1. INTRODUCTION

The concept of transition applied after changes in October 2000 in Serbia, based on liberalization and privatization, did not bring the expected performance of the domestic economy. With unbearable ease, the political elite spread the belief that "Serbia is on the right track," that "the European Union has no alternative" and that the Washington Consensus (privatization, liberalization, stabilization) should be resolutely implemented instead of an appropriate program and transition algorithm with Serbian specificities. Thus, the comparative advantage of Serbia's starting position for transition to a market economy, in the experience of others who entered the process significantly earlier, has been lightly squandered. Not only were the mistakes of others repeated, but also a number of others were made, which, of course, is not a characteristic of those who are either smart or cautious. Instead of the slightest problems at the transition from a system that collapsed (socialism) into a new one, as the bearers of political authority claimed, a "more prosperous" system (capitalism), the same ones that "the reign of madness have chosen" (Njegoš), they started to process privatization rules under "Murphy's law": if anything can go wrong, it will! A large number of formerly successful and well-off companies were ruined by privatization, and the number of jobless workers today is measured by hundreds of thousands. Most of these privatized companies have not been bought by their "bosses", so that the improvement of the business can be continued, or that the product quality standards or number of workers can be raised, but because of the land, materials, machines...

Thus, the money was drawn out through related legal entities, salary payments were delayed, contributions were not paid and such stories usually ended on court. Workers and erstwhile solid firms were left with no job, with debts that could not be settled in bankruptcy procedure. "There is still a lot to learn in the property field, there will be more research on it...." (Madžar, Lj. 1995). The experience in the privatization of social enterprises confirms that we have not learned much about the property, and whether the mistakes made in the previous privatization will be repeated when it comes to privatization of the public sector, that remains to be seen.

## **2. PRIVATIZATION IN SERBIA – CAUSES AND OBJECTIVES**

Direct state administration, and then self-management, determined the economic history of Serbia after the Second World War. In such economic system, there was no clear and direct connection between the results and work evaluation. That kind of state led to low motivation, and as a result we have a low productivity. The factual situation was not recognized, so the process of "socialization of losses" has started. Such attitude towards companies with a bad financial situation had a domino effect on strong companies. The summarizing effect of the previous processes has led to the collapse of socialism and the abandonment of the so-called "socialist paradigms". At the beginning of the 1990s, Serbia, like other socialist countries, entered the transition period, at the beginning of which the issue of privatization was imposed as the central one. The expectations were that privatization will be the driver of all changes, and will lead to a rapid improvement in the company's business. Formally, privatization in Serbia lasts for more than a quarter of century. Over the past 27 years, expectations and public attitude towards privatization have changed significantly. In the 1990s, privatization was seen as a necessary evil that violates the spirit of self-management and the certainty of the workplace. At the beginning of the last decade, with the change of the regime and the privatization model, during the short euphoria, privatization is perceived as a cure for all the problems of the Serbian economy. Soon there was a deep disappointment with the results, after which the privatization and the applied model became the main culprits for all the failures of the Serbian economy. Today, privatization in Serbia is experienced, if not as a robbery, at best, again, as a "necessary evil", while more and more often it is confirmed that private property is often not more efficient than social or state one. Namely, instead of a scenario where the private property shows its advantages over a social way of privatization, ie state property, as it was expected, we have a reduction in production, the phasing out of a large number of businesses, increasing unemployment, violations of the basic rights of employees and the growing stratification and poverty. Beginning of privatization proved to be more complicated and longer-term than the original expectations of a "new democratic political elite" after 2000, followed by a series of consequences. When assessing this process and looking at its effects, it is advisable to do it from at least two aspects. The first is economic in nature and implies an assessment of the extent to which the privatization process has created the preconditions for building a more productive and competitive economy, increasing employment and raising living standards. The second aspect of the observation would, of course, be how much the "price" is paid for in the sense of the occurrence of adverse effects. The main goal of privatization is to increase the economic efficiency of business entities. At the same time, with the tendency to achieve greater efficiency, there is a need for the provision of social justice. Fully achieving both of these objectives is impossible, bearing in mind the fact that economic efficiency and social justice represent conflicting goals. For this reason, the state authorities, as the carrier of the realization of the privatization process, must very carefully approach to its implementation, skillfully balancing between the tendency to increase economic efficiency and stimulate economic growth and development, while preserving employment at the same time and not leading to deeper social changes and stratification (Lakićević, 2011. 52).

For the success of privatization, according to the estimates of the largest part of economic analysts and experts, it is necessary to achieve several important preconditions:

1. Selection of the appropriate method and efficient organization of tasks related to its implementation;
2. Stable macroeconomic environment;
3. Appropriate economic policy;
4. Transparent system and a stable system of regulations and measures regulating the rules of the game in the economy.

The period after 2000 is characterized by the implementation of mainly the first generation of reforms under the "oversight" of the International Monetary Fund and the World Bank - privatization of the social sector, macroeconomic stabilization, price and external economic deregulation and liberalization, privatization of the banking sector, numerous legal adjustments resulting therefrom. The main goals of economic policy were to maintain macroeconomic stability, while achieving economic growth at the same time. However, numerous analyzes and surveys show that this process is accompanied by sharp macroeconomic imbalances (internal and external), and unresolved structural problems. On the macroeconomic agenda, the key transitional enigma was high unemployment, while privatization revenues were mainly directed to cover budget deficits.

### **3. PRIVATIZATION EFFECTIVENESS IN THE REPUBLIC OF SERBIA**

Privatization was a magical word from which it was expected that greater efficiency of privatized enterprises would be ensured by transforming the social into private property. The creators of the new (still actual) model of privatization in 2001 said that it was balanced with a multitude of conflicting interests, with the basic attributes of this: economic efficiency, political enforceability and social acceptability. The concept is theoretically primarily oriented to investors who need to redeem and continue to restructure enterprises, and to ensure quality management and development, and therefore the efficiency of the economy as a key response to comprehensive social changes. Privatization also needed to ensure the flow of funds into the budget, but also to solve the issues of restitution, ie restitution of previously seized property. Unfortunately, the effects of the implementation of the privatization process so far are far from anticipated. This is supported by the fact that in 2015, the total number of employees decreased by more than 700,000 workers in 1990, and that industrial production in 2015 was at about 40% in 1990. Comprehensive privatization of the entire social economy, based on the principle of commitment and sale of majority capital and assets, demonstrated not only all the organizational-technical difficulties of such a broad social transformation, without proper scientific foundation and background, but also led to devastating social consequences. Deindustrialization was one of the most significant. Privatization of social capital was not preceded by a study on the restructuring of the industrial sector of the national economy in conditions of rapid changes in the business climate, which would serve as an expert basis for the concretization of the program of simplicity of privatization and restructuring of social enterprises (Radulović, B. Dragutinović, S. 2014). The mistake was that the political authorities in Serbia did not understand (do not understand), or did not want to understand (they do not want to understand) that privatization is not a formula, but an approach. As a process it should lead to the development of a market economy dominated by (and not be the only) private enterprises and this form of ownership. Hence the privatization mission could not be a mere sale of existing companies, but above all a means of creating an environment that is attractive enough to provide further generation of privatized and new enterprises. The holders of political power and the creators of the legal framework for the realization privatization process in Serbia obviously did not accept the appeal of Russian academics and a number of American Nobel

Prize winners for economics (Kenneth Erou, Vasily Lentiev, Lorenz Khan, Robert Solou). They pointed out that it is necessary to abandon the Washington model of accelerated transition, that the transition to a genuine market economy takes time and attempts to significantly shorten this process leads to a disaster, that the policy of not mixing the state as a part of the shock therapy was not justified, that it is necessary for the state to take on the basic role in the economy, as is the case in modern economies of Sweden or Germany (Kovačić, 2011). One of the key findings of the NALED case studies of privatization in Serbia is that strategic investors, who are able to carry out the technological transfer (the implementation of the measure of operational restructuring and investment in equipment), have the crucial role in the success of privatization. In other words, the quality of investor was crucial for the effect of privatization. Among the fact that there were just a few investors like that in Serbia, they, except in certain sectors, were not ready or willing to take additional risks in conditions of unfavorable business environment due to significant surpluses of employees, unregulated property relations and financial liabilities. From year to year, it seems that an ever-increasing gap between the expected goals is being created. In other words, the gap between the proclaimed principles of "economically efficient and socially responsible reforms" and the results actually achieved is getting bigger and bigger. The consequence of poor sales of the company are the parallel or "gray" economy, monopolies on the market, the economy without permanent and domestic sources of financing, the inability to repay debts and launch a new production cycle. Serbia has become a polygon where the interests of foreign and domestic capitalists are realized, and the price is paid by employees and other citizens. So far, only "tycoons", politicians with the power and a part of the "elite" who experienced emancipation in the new transition period can be satisfied with the privatization. The failure of privatization in Serbia, among other things, is reflected in a large number of break-ins of sales contracts (about 45%); the fact that the aim of the buyer in privatization was most often the acquisition of ownership, construction land or facilities for further sale and use in which there is nothing in common with the activity of the subject of privatization; the fact that the revenues of the state, the filling of the budget for current consumption were of primary importance, and not the overall economic development; the fact that the restructuring of many subjects took too long with great misconduct, which continued in bankruptcy proceedings and others.. Distrust, dissatisfaction, disappointment, an extremely bad image of the authorities, and the infinitely poor view of new business owners have become a norm, a general conviction, a standard. It is noticeable that the pace of privatization has slowed down considerably in the last few years. From 2002 to 2008, 320 companies were privatized on average, while from 2009 to 2011, 47 companies were privatized annually, so that after 2012, privatization almost completely stopped, and the number of companies where the sales contract was terminated ending in bankruptcy is growing. The slowdown in privatization is primarily the result of two factors: first, the remaining social enterprises are relatively problematic, and the privatization of the public sector, which is politically sensitive, is postponed due to the permanent election cycles, and secondly, there has been a decline in investors' interest in the economic crisis. In addition to the slowdown in privatization, the process of nationalization of unsuccessfully privatized companies has been present in the last few years. The economic situation of most privatized companies and the social position of employees in them is worse than at the beginning of transition. A large number of privatizations is reduced to the mere sale of real estate and the abuse of the right to use construction land to the detriment of the state, local self-government and citizens of Serbia. Privatization did not lead to economic efficiency and economic growth, but at the same time it produced an additional army of the unemployed, an increase in poverty and additional social problems. It is also likely that private capital will enter the public sector (state, public and public utility companies), where even bigger problems can be expected if they continue with the existing concept and practice privatization, bearing in mind their strategic importance for the economy

of Serbia and all its citizens. The result of the previous privatization in Serbia greatly reflects the income per capita, measured by the parity of purchasing power. Serbia has achieved the least qualitative shift from European transition countries, with approximately similar performances over the past decade. The damage caused by bad privatizations is likely to never be calculated, and it is unlikely that anyone will be a culprit, because in a huge number of cases "robbery was done by law", so there are more and more of those who, when assessing the effects of privatization in the Republic of Serbia, speak of a "legally conceived criminal enterprise". A large number of jobs are lost in the privatization process, there is no doubt about it any more. The temporal disproportion between the need for rapid changes and the creation of an efficient economic structure and the situation with the surplus of employees creates uncertainty and fear of losing business. It is quite certain that in the coming period there will be a greater supply than the demand for labor. This, besides the material-social dimension, has its own specific psychological dimension. Real competition on the labor market opens up among young, highly educated people who first seek work and middle-aged workers who do not have the conditions for retirement and support children who are not yet able to work on their own. Those who were not supposed to, they forgot that privatization is not only economic, but always a socio-political thing, and the story that there are no negative consequences in that process is simply not correct. It has been shown that there are many "victims" of privatization and that, as a rule, it is always difficult for all societies, especially for working classes in them. It would be nice if everyone are immediately on the gain, but that is not a painless process. It has been shown that privatization is very expensive, that it inevitably leads to a reduction in labor rights, increased unemployment, social insecurity, and so on...

#### **4. RECOMMENDATIONS FOR PRIVATE CAPITAL ENTRY TO PUBLIC ENTERPRISES**

Often, in Serbia, public criticism is heard at the expense of public companies, but unfortunately, they are insufficiently analytical and unconfirmed with facts. In general, these criticisms are colored by globalist ideology and focused on the need to enter private capital into them (privatization, public private partnership, etc.). Because of the importance of public companies, it is certain that in this analysis, it should be attained professionally, scientifically and comprehensively. The distortion of the image of public enterprises and the creation of propaganda about their unsustainability leads us not only to wrong conclusions but can also make invaluable damages to society. The reform of public enterprises should be seen as a continuous, systemic activity aimed at clearly defining what the public sector needs in Serbia. In this sense, the definition of concrete directions and measures for the reform of public enterprises should be preceded by a detailed analysis of the current situation, in order to obtain a clear and reliable picture of the situation in which the entire socioeconomic system is located. This analysis should include, inter alia, the following aspects (Veselinović P. 2014.):

- Economic aspect (what is the economic situation of market entities and what are the possible sources of its improvement).
- Institutional aspect (which regulations need to be adjusted and changed in order to successfully implement the reform).
- Socio-psychological aspect (what is the mood of the population regarding the readiness to reform the entire socio-economic system, and public enterprises within it).

Starting from the above, the basic recommendations for the possible entry of private capital into public enterprises are:

- In relation to the privatization so far in enterprises in the social sector, it is necessary to require prior definition of goals and priorities in the privatization programs.

- Require careful selection and classification of these enterprises and in relation to this choice of privatization method, which must be preceded by public discussion and verification of the proposed program by the social partners. The rights of workers in these privatizations must be clearly defined by the law, as well as the impact on all citizens, their realization must not be delayed, nor can it depend on the will and decisions of the potential buyer / strategic partner.
- In the preparation for privatization, look at the social aspects and determine solid social clauses.
- Privatization projects from the very beginning must be subjected to control and monitoring, rather than to the already practiced subsequent detection of irregularities, which proved impossible to correct.
- The privatization process can only be accepted if it is in function of increasing productivity and profitability of operations, ensuring competitive ability and raising overall organizational performance, creating better working conditions, providing better or better quality services, and adequate employee protection, and not exclusively as the only way to reduce business costs through the reduction of the number of employees or the reduction of material rights.
- Rights acquired from employment, values and standards in the public sector must not be violated. Strengthening the mechanisms for their implementation and supervision, strengthening inspection services and stricter penalizing of negligent employers, putting the misdemeanor courts in full office, and greater affirmation of mechanisms for the peaceful resolution of not only collective but also individual labor disputes should be required.
- Prior inspection of complaints or disputes concerning the violation of collective rights must be requested from the inspection services and the judicial authorities.
- To demand respect for the right to a just and stimulating salary policy for conscientious devotion and quality work.
- To insist that the laws of the market are not broken only on workers - the state must establish a social security system for those who are unemployed. Measures of an active employment policy must be in function not only for stimulating new employment but also for retaining the existing number of employees.
- To demand that severance payments are not the goal and the sole way of solving redundant workers, but seek solutions that will ensure the continuation of work or long-term social security of workers - new production programs, additional qualifications, retraining, and similar.

## 5. CONCLUSION

Whether the number of the poor in the world has been reduced or increased in the course of neoliberal globalization, remains the subject of numerous controversies and studies. It is certain, however, that in Serbia, a program of recovery, which the domestic government conceived, under the supervision of international financial institutions, brought many problems that most privatized enterprises still face (if they still exist). The privatization analysis in Serbia points to the conclusion that it did not bring the expected economic growth on the basis of improving the efficiency of operations, but only a sort of redistribution of assets and economic power. It became apparent that the consequences of privatization were extremely serious and persistent, that it was accompanied by corruption, crime and various types of frauds. The unforeseeable consequences often remain unprocessed and leave long-term traces, distrust of citizens, workers, serious investors in the country. The need to solve these problems, which would be particularly important for the eventual process of entering private capital into the public sector, requires some legal solutions that would be appropriately addressed to those who deal with corruption and privatization crimes.

For example, with the introduction of new criminal offenses, the time-barred limitation can be abolished. (In some countries these acts are not out of date because of their harmfulness and danger, for example in Croatia). Many will say that it is better for someone to herald once than never, but the problem is that now it is too late for the most privatized social enterprises. Many of these companies are ruined and looted, and the result will be even worse, if the same approach is applied in the announced privatization process to public companies. In that sense, there is a danger for privatization in a public sector to become the continuation of a proven recipe for the acquisition of the profit for a small group of people, rather than a good basis for the food security of the population. The interest of foreign capital for investing in Serbia is insufficient, and domestic investors do not have sufficient entrepreneurial capital to fully take on the leading role. In the structure of foreign investments, greenfield investments and recapitalization are needed. The share of investments in Serbia's GDP is almost twice lower than other transition economies. In order to increase foreign investments, it is necessary to increase the level of economic freedom, to lower tax rates, to achieve macroeconomic stability and to create an attractive business environment for investors. It is necessary to create the right environment for the development of new enterprises, because they, as elsewhere in the world, are more productive, more profitable and the main generator of development. The failure of the privatization process in Serbia is caused by the fact that privatization was carried out regardless of the consequences, there was no general consensus regarding the concept of privatization, the most important goal was budget revenue, rather than the growth of living standards based on the growth of production, employment and export. Despite the criticism of many analysts and experts that privatization so far has served exclusively to charging the spending budget, the achievement of its simultaneous economic and social efficiency has been the last concern of the authorities, that there have been irregularities in the implementation of that process and that there are no adequate mechanisms for its control, it would be wrong to "demolish done and start from the beginning", but to focus on correcting mistakes and on affirmation of the elements necessary for an efficient socially responsible market economy. Finally, we can only quote Noam Chomsky, who pointed out that no negative social process has gone so far that it cannot be stopped, and its direction be inverted, because they are all based on people's decisions. Since people who decide today about the fate of public companies seem to have no idea of the possibilities of a different kind of economy and since they persistently continue walking down the path that has been set by international neoliberal institutions, the consequences of such decisions may have far more negative, greater and longer-term impacts than the negative effects of poor privatization of social enterprises.

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## TENDENCIES OF PUBLIC HEALTH CARE EXPENDITURE - ASSISTANCE IN HEALTH CARE MANAGEMENT IN EU REGIONS

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### **ABSTRACT**

*An interest generated by the proper qualification of tools used for the creation of health care policy enables you to conduct a deeper analysis of phenomena connected with health care. From the point of view of the reforms carried out in health care, it is extremely important to assess the functioning of health systems which is often the starting point in the decision-making process in health care. One of the determinants of this assessment is the size of public health care expenditures, the level of which affects the possibilities of health units. In addition, the analysis of these expenses allows you to capture changes in different periods and identification of trends of the examined phenomenon plays a major role in taking decisions concerning health service management. Furthermore, effective use of public funds for health services is essential for the functioning of therapeutic entities. For this reason, two purposes are presented in the study. The first, the article attempts to determine the short-term and long-term tendencies for public healthcare expenditure in the EU countries as regions on which Poland models itself by defining and implementing health policy. The second aim is to carry out comparative statistical analysis of the health systems functioning assessment using selected numeral taxonomy methods. These methods were used to organize and classify regions. In the first part healthcare expenditures depend on the main measure of economic growth – GDP and the share of people over 64 years. The statistical analysis includes: number of hospitals and beds in hospitals, average length of stay in the hospital, number of doctors, nurses and midwives and public expenditures on health care. The studies were conducted for selected regions (EU members) based on annual data for the years: 2014-2016 (statistical survey) and 2005-2017 (econometric survey). The data comes from the OECD and Eurostat databases. The cross-section-time data were used to show the trend.*

**Keywords:** *development path, Koyck model, assessment of health systems, public healthcare expenditure, short-term and long-term tendencies, Ward's dendrogram*

### **1. INTRODUCTION**

Elements of market economy are more and more frequently incorporated into the operations of health-care institutions, which allows for a more efficient and more rational utilisation of public funds destined for healthcare (Wrona, 2011). A particular stress is placed on managing health-care institutions properly, for example, through efficiency assessment or conducting analyses regarding the costs related to functioning of these institutions and determining economic indicators. Application of quantitative methods in creating a health-care policy of almost each country is undisputable. It seems obvious that without reliable statistical and econometric analyses it is difficult to speak about managing this specific sector properly. Analyses of this type are particularly important at the time of transformations and political changes. Thus, an important aspect is to analyse the healthcare sector from the economic point of view. This sector's capacity is of vital importance as each member of the society sooner or later needs to make use of its services. This is particularly true nowadays, as one can observe an increased share of health-care related costs generated by elderly citizens. This state of affairs is driven by demographic changes that are occurring in all countries. It should be pointed out that in the situation when societies are aging it is difficult to balance the incomes and expenditures of health-care related services – health-care related needs are on the increase while the number of

contributors is declining (Golinowska and Tabor, 2014; Eenoo et al., 2015). Although these costs are influenced to a large extent by persons under the age of 15, yet an increasing number of elderly persons in the total population causes that the impact on public health-care related expenditures is decreasing in case of the young. However, this social group also generates significant costs in healthcare. The current state of healthcare in particular countries is conditioned by healthcare systems functioning in them or rather features of these models. One cannot observe one organisational form and the level of resources destined for this sphere of economy varies substantially. Healthcare can be financed from the contributions, general taxes or based on voluntary health insurance. First two forms occur in Europe, the third one is in force in the USA (Białynicki-Birula, 2010; Rutkowska-Podołowska, Popławski and Zaleska-Tsitini, 2011). Despite the fact that healthcare systems vary to a large extent (the division is driven by various economic, demographical, historic and cultural conditionings of the countries), yet a priority in each system is a possibly universal access to as wide range of services as possible and financial protection of sick and disabled persons (Jaworzyńska, 2016). However, while considering this division of systems it should be stressed that it is expenditures that come from the state's budget that mainly determine the package of offers provided by healthcare institutions that is directed at healthcare customers. Public expenditures allocated for healthcare depend primarily on the GDP, but also on demographic changes, that is an increased share of elderly persons in the whole of the society. In this respect, in the paper its author has proposed a hypothesis that in order to make proper decisions in healthcare it is necessary to determine how healthcare is perceived and follow the example of the countries where organisational and financial healthcare systems are functioning successfully. In order to verify this hypothesis two objectives have been set in the paper. Firstly, the author has made an attempt to determine short- and long-term trend of public expenditures destined for healthcare in the EU countries, which constitute a determinant for Poland both in relation to allocating resources for healthcare and applied organisational solutions of this sector. Secondly, using selected taxonomic methods the author has attempted to assess the functioning of healthcare systems in the EU countries. In order to pursue these objectives, econometric model and cluster analysis have been applied and a development path for Poland has been determined.

## 2. METHODOLOGY

While analysing public expenditures destined for healthcare generally two types of factors are considered, e.g. economic and demographic ones. This happens due to the fact that these factors reflect economic balance and have influence on burdening the health care. Thus, it is interesting to determine the tendency in public expenditures development and assess the functioning healthcare system. The first aspect may contribute to making proper decisions in healthcare and the second one through a comparison between the Polish system and the ones that are functioning in other countries provides grounds for determining which model of healthcare we should follow if we want to improve the situation of healthcare, and in particular to increase patient satisfaction or improve the quality of healthcare. Therefore, while assessing healthcare public expenditures (HPE) they have been conditioned on two factors: GDP and the number of persons over 65 years of age (LST). The first one represents economic factors and the second one demographic factors. The initial research also considered the number of persons under the age of 15, however, having conducted the research it turned out that among the proposed variables only the GDP level and one demographic factor could have been analysed together. This results from the fact that while studying the dependence among the variables it turned out that the number of persons under the age of 15 and the number of persons over 65 years of age are too strongly dependent one on another. Thus, such a situation makes it impossible to include all these factors in one equation. Due to an increased share of elderly people in each society the analyses have been limited to the elderly and GDP.

As Suchecka and Urbaniak state (2016) until the year 2030 about 25% of the population in Europe will be over 60 years old. In this respect, in order to describe the dependent variable a power form of model has been proposed (which allows for a good adjustment to a non-linear flow of empirical data), which having been logarithmed takes a linear form, (Varlamova and Larionova, 2015), and this makes it possible to estimate the model with the use of the Ordinary Least Squares method. The determined on its basis elasticity coefficients may contribute to formulating conclusions about the necessity to improve the amounts of allocated healthcare public expenditures in the situation when decision-makers in healthcare are willing to improve the efficiency of healthcare institutions operations and decrease the costs related to the supply of healthcare services. Indirectly this analysis may contribute to managing healthcare institutions properly through application of tools and solutions that allow to recognise the trends in healthcare expenditures development. However, it needs to be remembered in the conducted analyses that economic variables are generally of non-stationarity nature. In order to remove non-stationarity, it is possible to apply, for example, not levels of processes but their increments (Piłatowska, 2003). While demonstrating the trends occurring in the short run and after the issues of variables non-stationarity have been considered, process increments have been included in the model (logarithm increments of subsequent variables). As a result of these transformations the following form of the model has been obtained:

$$\Delta \ln HPE_{it} = \alpha_1 \Delta \ln GDP_{it} + \alpha_2 \Delta \ln LST_{it} + \varepsilon_{it} \quad (1)$$

where: HPE – public health-care expenditures; GDP – gross domestic product; LST - people over 64 years;  $\alpha_1 \alpha_2$  - short-run multipliers;  $\varepsilon$  - random term;  $i$  – number of country;  $t$  – period.

However, this model does not demonstrate the trends that occur in the long and short run. Due to the fact that the main determinant of HPE is the GDP (Amiri and Linden, 2016), in order to present the impact of the GDP at different times the Koyck model has been applied – ADL model (1.0):

$$\ln HPE_{it} = \ln \beta_0 + \beta_1 \ln HPE_{it-1} + \delta_0 \ln GDP_{it} + \varepsilon_{it} \quad (2)$$

where:  $\delta_0$  - short-run multiplier;  $\delta = \delta_0 / (1 - \beta_1)$  - long-run multiplier;  $|\beta_1| < 1$  - stationarity model ; HPE. GDP;  $\varepsilon$ .  $i$ .  $t$  – as in model (1).

Ciołek writes that the "stationarity model", but according to the author it is not the right term, because stationarity is a property of a time series, not a model. Owing to the fact that the volume of the abovementioned expenditures remains closely related to the healthcare system functioning, the author has attempted to assess its functioning. The following have been adopted as representatives of wage costs: a share of doctors in the total population ( $X_1$ ), a share of nurses in the total population ( $X_2$ ) and a share of midwives in the total population ( $X_3$ ). Non-wage costs represented: the number of beds in hospitals per capita ( $X_4$ ), an average length of time spent in hospital ( $X_5$ ). The demographic factor was symbolised by a share of persons over 65 years of age in the total population ( $X_6$ ), and the economic factor by healthcare public expenditures in USD per capita according to Purchasing Power Parity ( $X_7$ ). Due to the fact that each of the variables is a stimulant, standardisation of qualities was necessary, which makes use of quotient transformation (Malina, 2004). The distance measure in the analyses was Euclidean distance (Panek, 2009), as the best one this method that provides results that are characterised by the largest value of directional variance.

Then, were determined, while defining the pattern and anti-pattern the author used two methods, based on orthogonal cast. In the first method the greatest value for a j-th quality was adopted as a pattern, and the lowest value for a j-th quality as an anti-pattern. In the second method the pattern constitutes the value of the third quartile for a j-th quality, and the anti-pattern the value of the first quartile for a j-th quality. Having done the calculations in both methods, synthetic qualities for each object and in each year were determined and having determined the weights the rank method was selected (the best ranking was adopted to be one when the directional variance reached the highest value) (Kolenda, 2006). In order to check the similarity of the systems the author applied the cluster method according to which objects are divided into groups and homogenous objects are included into each of them while the different ones are attributed to various clusters. This analysis was applied as the author meant to demonstrate similarities and differences of the countries driven by a multidimensional composition of qualities. In the space-time analysis the cross-section-time data was used and the results were obtained with the use of the panel model – objects (i) were the EU countries, time (t) covered the years 2005-2017. The analyses were carried out with a breakdown into two groups, depending on fundamental principles of healthcare systems: the countries included into the group of those that possess an insurance healthcare system and the ones that are included into the group of possessing a budget healthcare system. The basis for the comparisons constituted the population of a given country and the data was expressed in a currency unit and converted into fixed prices from the year 2005. The statistical research concerned the last years that allowed for data collection, the years 2014-2016 (data for 2017 is unavailable in databases). In case of determining the trend the author analysed selected countries that belong to the EU (so called old countries of the EU) and Poland. Greece was not included into this part due to a too strong correlation between healthcare financing and this sector systems (Strzelecka, 2016). Unfortunately, while assessing healthcare system functioning Portugal, Spain and Ireland were excluded, which was caused by lack of data for at least one variable. The analyses made use of annual data that came from the OECD and Eurostat databases. In the econometric part the GRETl package was used for the estimation and in the statistical part the Statistica package and “Numerical taxonomy” software were applied.

### **3. PUBLIC HEALTH CARE EXPENDITURE ELASTICITY**

The level of financial resources allocated from public sources and organisational solutions in healthcare undoubtedly have an impact on health-care services consumption (Howdon and Rice, 2018; Varlamova and Larionova, 2015). This issue will be recognised as “obvious and normal” by a majority of people. However, this will not change the fact that it is important – driven by the present demographic situation (ageing populations, that is a growing share of elderly people in the total population), consumption of medical services will become more intense and common. Therefore, this is a necessity to verify the social policy, including healthcare one, so the citizens are able to participate in the process of healthcare services consumption anywhere and everywhere, especially that the results of treatment are to a large extent dependent on the level of healthcare expenditures (Björnberg, 2018; Akca, Sonmez. and Yilmaz, 2017). Thus, it is of vital importance to undertake attempts aimed at determining how the GDP and LST affect healthcare expenditures in the short run (Table 1).

*Table following on the next page*

*Table 1: Short-term elasticity ( $E_D$ ) – model (1) (Own calculations)*

Variable		All countries	Countries with the budget system of health care	Countries with the insurance system of health care
$\Delta \ln GDP$	Parameter estimate (elasticity)	0.672	0.341	0.710
	T-Student statistics	3.095	3.125	6.334
$\Delta \ln LST$	Parameter estimate (elasticity)	0.526	0.545	0.873
	T-Student statistics	6.629	1.942	2.654

Based on Table 1 it can be concluded that in the short run healthcare expenditures grow slower than the increase of listed explanatory variables. In each case 1-% growth of the GDP causes an increase of the analysed expenditures on average by (respectively to the order in the Table 1): 0.68%, 0.34%, 0.71%. This change is distributed in a slightly different manner with reference to the share of elderly persons – healthcare expenditures also grow. However, one can observe here a stronger impact in the groups of countries with a breakdown into the type of healthcare system functioning in them ( $E_D = 0.55, 0.87$ ), and a weaker impact when all the countries are considered together ( $E_D = 0.53$ ). This probably results from the fact that in the countries „with a breakdown into healthcare systems,, there exists a different approach to offering (guaranteeing) healthcare to elderly people, who, most frequently are no longer professionally active. However, it needs to be pointed out that regardless of the functioning health care system (in EU) a majority of expenditures comes from public sources (OECD, 2019; Eurostat, 2019), which means that economic growth plays an important role here. Its impact was also confirmed by the results obtained while estimating the Koyck model, which was applied in order to determine income elasticity in various periods. Such information may be obtained from the analysis of both short-run and long-run multipliers (Gruszczyński and Podgórska, 2003; Hansen, 2017). Therefore, in the Koyck model the author considered only the impact of the economic growth measure – GDP - on healthcare expenditures. Based on the conducted research both multipliers were determined, and the estimation results have been included in Table 2.

*Table 2: Income elasticity of health care expenditures – model (2) (Own calculations)*

The studied group of countries	Variable	Parameter estimate	T-Student statistics	Short-term elasticity ( $E_{DS}$ )	Long-term elasticity ( $E_{DL}$ )
All countries	Const	-0.951	-4.672		
	$\ln_{-1} PUB$	0.734	21.745	0.283	1.064
	$\ln GDP$	0.283	6.923		
Countries with the budget system of health care	Const	-0.863	-1.289		
	$\ln_{-1} PUB$	0.748	17.047	0.250	0.995
	$\ln GDP$	0.250	4.223		
Countries with the insurance system of health care	Const	-1.892	-5.414		
	$\ln_{-1} PUB$	0.560	8.782	0.496	1.128
	$\ln GDP$	0.496	6.430		

On the basis of the obtained results one can notice that in all the countries as well as the ones where there exists an insurance healthcare model, healthcare public expenditures in the long run grow faster than the Gross Domestic Product ( $E_{DL} > 1$ ). In the countries of budget healthcare model, a change can be observed of almost 1:1 ( $E_{DL} = 0.99$ ). The fastest growth can be observed in the countries where healthcare is financed mostly from contributions. As for the intensity of impact, in the short run one can observe a decline in coefficients. In this period, with relation to the GDP, analysed expenditures also grow, but at a slower pace – the slowest pace can be

observed in case of countries that mainly finance healthcare from taxes. It can be concluded then that healthcare is perceived in the short run as an essential good and in the long run as a luxury good (this is confirmed by Aslan, Menegaki and Tugcu, 2016). Thus, the analyses show that the impact of the Gross Domestic Product on the analysed expenditures was in the short run weaker than in the long one. A faster growth of expenditures in the long run may be the outcome of the fact that the recipients need time in order to adjust the demand and healthcare expenditures to changes in their incomes (Lago-Penas, Cantarero-Prieto and Blazquez-Fernandez, 2013). In other words, the mechanisms that adjust decisions on allocating financial resources for health are postponed in time and so in particular periods one can observe a gradual adjustment to varied health needs of the society. Moreover, having analysed the results obtained one can draw a conclusion that at present health needs of the society are satisfied to only a slight extent. Therefore, in the author's opinion, there is a need for changes in healthcare, which according to Suchecka and Skrzypczak (2011) result from a greater importance of additional health insurances, departure from financing healthcare from public resources in favour of private healthcare (a growing share of out-of-pocket charges) or transferring a part of responsibility for health from public onto private entities. Also, development of new medical technologies is equally important, ICT in particular. In the presented models, according to the order in Table 2, the number of observations amounted to 180, 108 and 84, and the relative error committed while using the estimated models amounted to 5.25%, 4.25%, 6.54%. Healthcare public expenditures were explained by the model in over 97%. The impact of random factors that were not considered in the model was lower than 3%. In case of almost each variable the p-value was 0.00, except for only constant in the countries with a budget healthcare system – here it was only 0.20, but taking into account the validity of econometric modelling it can be accepted, especially as the p value for the test from the  $F = 2.19e-79$ . To sum up this discussion it needs to be stressed that the presented estimates of elasticity may serve as a starting point for forecasting the relation among the presented factors, and therefore may constitute a basis for the decision-making process in healthcare institutions. Additionally, determining how healthcare is perceived by the society may contribute to proper healthcare management at the macro and micro level.

#### **4. THE HEALTH SYSTEMS FUNCTIONING ASSESSMENT IN EU COUNTRIES**

From the perspective of organising particular healthcare institutions and their components, responsible for collecting and spending public funds, it seems particularly important to assess the operations of organisations of this type. This plays an important role in making decisions by the healthcare management bodies, a priority of which should be and is providing by healthcare institutions a full offer of medical services. Thus, it is indispensable to ensure the efficiency of the healthcare system in order to secure efficient operations of the abovementioned institutions (Bui et al., 2015). Striving to guarantee patients the highest possible level of medical services, improve their quality, increase patient satisfaction, it is necessary to change the solutions that are in force in healthcare, whether they are legal or organisational ones, or whether they concern healthcare financing. Thus, one of the means that can be helpful in pursuing this goal might be, among others, development of public-private partnerships (Kosycarz, Nowakowska and Mikołajczyk, 2019), comparing the healthcare systems in different countries and making use of experiences of particular EU regions (member states) in this respect. In order to analyse this issue, the author decided to rank the objects first and then distinguish synthetic qualities. While establishing the order of particular countries on the basis of the analyses it was observed that among the proposed two methods the highest value of directional variance was obtained in the years 2014 and 2015 for method 1, and in 2016 for method 2. Having determined the values of synthetic qualities for each country, it can be concluded that in relation to analysed qualities, first positions in the ranking occupy our western neighbours and Sweden (years: 2014 and 2015)

as well as Germany and Belgium (2016). Two last positions in turn belong to Italy and Greece. However, while analysing the position of our country one can observe that Poland moves to ever higher positions in the ranking over the time (Table 3). This conforms the ever-higher position of Poland, due to the proposed variables. However, as Nieszporska states (2017) healthcare in our country is not ideal and not even close to it. This is not supported by economic development either, and patients keep complaining on public healthcare. Probably, due to a low quality of healthcare services, growing demands regarding provided medical services, change in the mentality related to taking care of their health cause that recipients more frequently choose the services of private healthcare.

*Table 3: The values of the synthetic quality (Own calculations)*

<b>Countries</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Austria	2.540	2.554	2.509
Belgim	2.872	2.884	2.922
Denmark	2.596	2.591	2.349
Finland	2.713	2.719	2.607
France	2.572	2.577	2.588
Germany	2.982	2.986	2.960
Greece	1.915	1.917	1.890
Italy	1.916	1.907	1.891
Luxembourg	2.751	2.714	2.582
Netherlands	2.306	2.263	2.029
Poland	2.215	2.248	2.465
Sweden	2.958	2.940	2.757
United Kingdom	2.224	2.199	2.127

Based on the values of the synthetic quality the author has created maps of objects that allow for determining a development path for our country, certainly on condition that analysed qualities are taken into consideration. In other words, this map can be applied to analyse the position of a selected object in the ranking and allows to identify entities that are better than it and most similar to it. Due to the limited size of the paper it was possible to present the results only for two extreme years: 2014 and 2016. In 2014 Poland, with regard to the analysed qualities, should have followed the example of Belgium and then Germany and Sweden. Out of these three countries the greatest similarity to Poland, with regard to the analysed qualities, bears Belgium (Figure 1). As one can notice Poland should have followed the example of the countries where the range of medical services was clearly defined and patients co-payment health services. This could constitute a support mechanism for healthcare financing and limit, to necessary treatment only, utilisation of these services.

*Figure following on the next page*

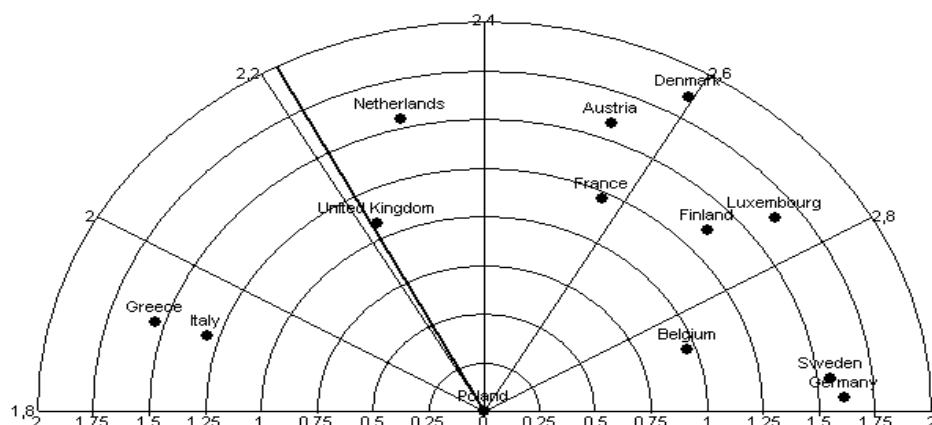


Figure 1: Object map for Poland in 2014 (Own calculations)

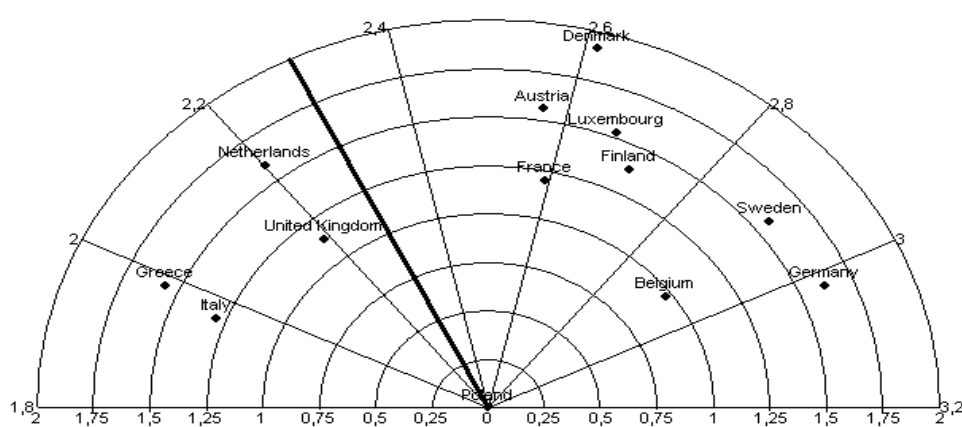


Figure 2: Object map for Poland in 2016 (Own calculations)

An interesting situation was obtained two years later. Poland, with regard to the analysed qualities, should have been followed the example of Belgium and Germany and should have not tried to catch up with Sweden (Figure 2). This can be explained by changes introduced to the social and economic policy in Poland and Sweden. Sweden is the country with the most decentralized healthcare system and Poland with a weakly distinctive one. While making an attempt at comparing the similarity among the EU regions where healthcare systems function in a similar manner the author has clustered the countries, starting with a single-element cluster, through the ones that combine countries that are most similar one to another, and finishing with the one that unites all the analysed objects (Figures 3 and 4).

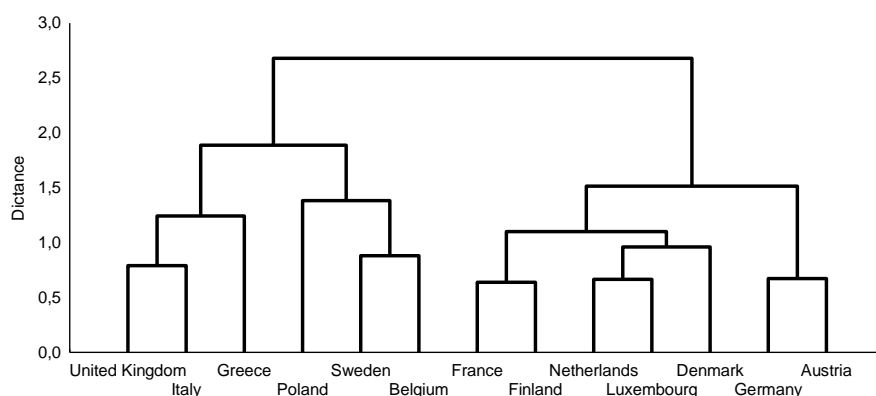


Figure 3: Ward's dendrogram in 2014 (Own calculations)

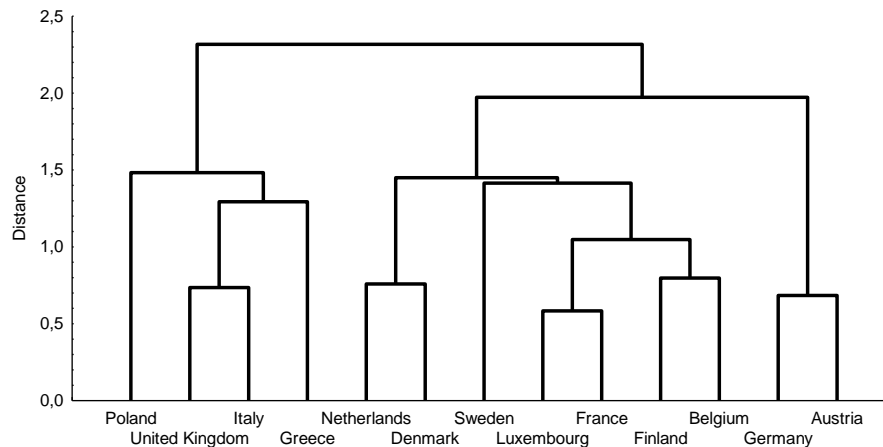


Figure 4: Ward's dendrogram in 2016 (Own calculations)

While analysing the abovementioned pictures one can state that the largest similarity with regard to the analysed qualities demonstrated in 2014 Finland and France, and in 2016 France and Luxembourg. Distances between these regions with relation to the analysed structure were smallest. Poland at a similar level of bond constitutes a distinct group, as the healthcare system that functions in our country is of budget and insurance nature, although for 20 years financing primarily from contributions has been in force (Paszowska, 2017; Tymowska, 2001). To sum up, it can be concluded that within particular groups countries are characterised by a strong resemblance with relation to the analysed structure.

## 5. CONSLUSION

Reforms in the healthcare are somehow a result of an insufficient effectiveness, inequality in access to medical services and low competitiveness. Also important is the feedback effect that can be observed between ageing societies, increased health prevention and application of modern IT solutions in healthcare. Moreover, the demographic situation in the whole of Europe causes a growing demand of the society for health services. Decision-makers at healthcare institutions, while searching for the most effective ways of managing organisations, attach more importance to applying statistical and econometric methods, and conclusions drawn in their basis. The results of the conducted econometric modelling prove that the effect of the GDP impact on healthcare public expenditures is much stronger in the long run than in the short run ( $E_{DL} > 1$  v  $E_{DL} \approx 1$ , contrary to their values in the short run -  $E_{DK} \in (0,2; 0,5)$ ), regardless of the functioning healthcare system. This might be an outcome of adjusting the changes in incomes of the citizens to changes in demand for medical services. However, one needs to remember about the economic situation of these countries and the standard of living of their citizens. Still, it cannot be forgotten that this standard is closely related to the GDP, whose value indicates the affluence of the society, informs about the volume of resources destined for collective and individual consumption as well as investments. In addition, the analysis shows that the most similar healthcare system to the one that functions in Poland is in force in Belgium. Thus, we should follow it in the first place and only then follow the healthcare system in Germany. While analysing the dendrogram one can risk a statement that when analysing all the regions together, the differentiation among the EU regions is decreasing, and what follows the distance between them is shrinking. This indicates the fact that over the years all the countries create a final cluster at ever-lower level (the last bond was created at the level of approx. 2.68 (2014), and in 2016 it reached the level of approx. 2.32). However, the author would like to stress the fact that the presented analyses may constitute a starting material for further research regarding healthcare public expenditures, especially in a dynamically changing environment.

In this case it is indispensable to consider in analyses a larger number of variables (e.g. institutional, epidemiological), which have an influence on changes in healthcare systems.

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# COMPARATIVE ANALYSIS OF THE FACTORS INFLUENCING THE DEVELOPMENT OF THE INFORMATION SOCIETY

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## **ABSTRACT**

*Modern technologies exert an ever increasing influence on the contemporary society, which is an information society, where information gathering and its skillful processing are becoming invaluable. The development of the information society depends on i.a. the access to modern technologies and the ability to use them. This brings the problem of digital exclusion, which particularly affects senior citizens. The paper presents an analysis of a particular set of diagnostic features. The variables, whose relevance and statistical accuracy were first verified, formed a basis for the classification of the selected European countries in terms of the computer and Internet use by physical persons aged 55-75. The data comes from the statistical yearbooks published by the Central Statistical Office and from the Eurostat websites; it covers the years 2018, 2012 and 2007. The aim of the analysis is to investigate the level of Internet and computer use by people aged 55-75 in the selected European countries in the years 2018, 2012 and 2007 by means of Ward's taxonomic method.*

**Keywords:** *Econometric Methods, Information Society, Taxonomic analysis*

## **1. INTRODUCTION**

We are now witnessing an ongoing digital revolution. The development of new technologies affects all aspects of our lives, the life of the information society. The information society has turned global, and information and communication technologies connect people around the world. New technologies, which are being constantly created and implemented, facilitate our daily life (Globan-Klas, Sienkiewicz, 1999), (Bliźniuk, Nowak, 2005). An ordinary mobile phone is no longer just a communication tool – it has become a camera, a video recorder, a television, and a web browser. Members of the society where new technologies are in common use can promptly contact their families and friends, as well as lead a more active social life. The number of Internet and new technology users has been growing year by year and we can observe an increasing senior population among them. Unfortunately, there are some side effects as well, including digital inequality and exclusion. Although the number of senior citizens using the Internet has been rising, they still constitute the smallest group of users. We can quite often see they are digitally excluded, which results from older adults' fear of using the Internet and acquiring new skills since learning tends to become more difficult as we age. Social exclusion is one of the most complex social problems nowadays. It prohibits people from satisfying their personal and group needs as well as impacts adversely on the socio-economic development and technical advancement. Seniors may not have their own computer or Internet access. In addition, there may not be anybody around who can teach them to adopt modern technology. For many years now, both government and non-government organizations have been running various programs to counteract digital exclusion. They organize computer training courses for senior citizens, where older adults can learn to use mobile phones, tablets and laptops, etc. as well as the Internet. The course participants get acquainted with online banking and online shopping; they are taught how to write an email, download documents available on e.g. Town Hall websites and submit them online. Such skills can significantly improve the quality of older adults' lives; for example, they do not need to personally deliver documents to various offices.

In summary, two simultaneous phenomena are taking place these days: one is constant development of modern technologies and the other – an increase in the older population fighting digital exclusion. The aim of the article is to analyse the use of the Internet and new technology by people aged 55-75 in selected countries in Europe by means of one of the taxonomic clustering methods.

## 2. THE METHOD FOR THE CLASSIFICATION OF COUNTRIES BASED ON THE LEVEL OF INTERNET USE BY PEOPLE AGED 55-75 BROKEN DOWN BY GENDER (IN SELECTED EUROPEAN COUNTRIES)

The analysis is carried out by means of Ward's taxonomic method, which is one of the agglomerative clustering methods. The procedure enables building a complete hierarchy of clusters by generating a dendrogram. At the beginning, it is assumed that each object constitutes a separate cluster. The next step involves combining objects that are separated by the shortest distance into a new cluster. The process is continued, i.e. clusters are successively merged, until all the objects belonging to the analysed set end up in a single cluster. The study adopted the Euclidean distance as a distance measure. The method and its application were thoroughly discussed in the following works: (Grabiński, Wydymus, Zeliaś, 1989), (Panek, 2009), (Pociecha, Podolec, Sokołowski, and Zajac, 1988).

## 3. THE EMPIRICAL ANALYSIS

The aim of the study is to investigate the level of Internet use by people aged 55-75, broken down into male and female users, in selected European countries. The years 2018, 2012 and 2007 were selected for the comparative purposes, and the data comes from the Statistics Poland website. The variables employed in the analysis had to meet certain requirements: they are measurable and best describe the level of Internet use by the individuals examined in the study (Janiga-Ćmiel, 2016, pp. 94-103), (Janiga-Ćmiel, 2017a, pp. 283-288), (Janiga-Ćmiel, 2017b, pp. 787-795), (Janiga-Ćmiel, 2018a, pp. 2099-2106), (Janiga-Ćmiel, 2018b, pp. 76-84). The following variables were used:

- X<sub>1</sub> - Number of the Individual lives in household without the Internet use,
- X<sub>2</sub> - Number of the Individuals making payments via the Internet,
- X<sub>3</sub> - Number of the Individuals who have never used either the computer or the Internet,
- X<sub>4</sub> - Reasons for not having Internet access at home,
- X<sub>5</sub> - Number of the Individuals who use a mobile phone without the Internet.

The analysis of the data for the year 2018 by means of the method discussed above resulted in separating groups of countries characterized by a similar level of Internet use by women aged 55-75. Four groups of homogeneous development emerged:

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>
Denmark	Belgium	Ireland	Bulgaria
Luxembourg	the Czech Republic	Italy	Greece
Netherlands	Germany (until 1990 former territory of the FRG)	Cyprus	Croatia
Finland	Estonia	Lithuania	Portugal
Sweden	Spain	Hungary	
United Kingdom	France	Malta	
Iceland	Latvia	Poland	
Norway	Austria	Romania	
		Slovenia	
		Slovakia	

*Table 1: The groups of homogeneous development of the phenomenon - women (2018)  
(based on own research)*

For the year 2012, three groups formed:

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>
Denmark	Belgium	Bulgaria
Luxembourg	the Czech Republic	Greece
Netherlands	Germany (until 1990 former territory of the FRG)	Spain
Finland	Estonia	Croatia
Sweden	Ireland	Italy
United Kingdom	France	Cyprus
Iceland	Latvia	Lithuania
Norway	Hungary	Malta
	Austria	Poland
	Slovakia	Portugal
		Romania
		Slovenia

*Table 2: The groups of homogeneous development of the phenomenon - women (2012)  
(based on own research)*

Similarly, for the last period, i.e. the year 2007, three groups emerged:

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>
Belgium	Denmark	Bulgaria
Germany (until 1990 former territory of the FRG)	Iceland	the Czech Republic
Netherlands	Norway	Greece
Ireland	Finland	Spain
France	Sweden	Croatia
Luxembourg	United Kingdom	Italy
Austria		Cyprus
		Latvia
		Lithuania
		Hungary
		Malta
		Poland
		Portugal
		Romania
		Slovenia
		Slovakia
		Estonia

*Table 3: The groups of homogeneous development of the phenomenon - women (2007)  
(based on own research)*

Next, the same variables were employed to perform the analysis of Internet use by men. For the year 2018, three groups of homogeneous development formed:

*Table following on the next page*

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>
Belgium	the Czech Republic	Bulgaria
Sweden	Estonia	Ireland
Denmark	Spain	Greece
Luxembourg	France	Croatia
Netherlands	Italy	Cyprus
Finland	Austria	Latvia
United Kingdom	Slovenia	Lithuania
Iceland	Germany (until 1990 former territory of the FRG)	Hungary
Norway		Malta
		Poland
		Portugal
		Romania
		Slovakia

*Table 4: The groups of homogeneous development of the phenomenon - men (2018)  
(based on own research)*

In 2012 there were four groups.

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>
Denmark	Belgium	Ireland	Bulgaria
Sweden	the Czech Republic	Croatia	Greece
Luxembourg	Estonia	Italy	Poland
Netherlands	Spain	Cyprus	Portugal
Finland	France	Latvia	Romania
United Kingdom	Austria	Lithuania	
Iceland	Germany (until 1990 former territory of the FRG)	Hungary	
Norway		Malta	
		Slovenia	
		Slovakia	

*Table 5: The groups of homogeneous development of the phenomenon - men (2012)  
(based on own research)*

For the last year, 2007, the final clustering was also comprised of four groups.

G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>
Denmark	Belgium	the Czech Republic	Bulgaria
Luxembourg	Germany (until 1990 former territory of the FRG)	Estonia	Greece
Netherlands	France	Ireland	Croatia
Finland	Austria	Spain	Cyprus
Sweden		Italy	Lithuania
United Kingdom		Latvia	Romania
Iceland		Hungary	
Norway		Malta	
		Poland	
		Portugal	
		Slovenia	
		Slovakia	

*Table 6: The groups of homogeneous development of the phenomenon - men (2007)  
(based on own research)*

For all the groups, formed both in the year 2018, 2012 and 2007, the differences between the inter-group and intra-group variances were examined. It was found out that in each case the inter-group variance is significantly higher than the intra-group variance. Thus, the calculated difference is statistically significant and there is no need for further delimitation of the groups (Grabiński, Wydymus, Zeliaś, 1989), (Panek, 2009), (Pociecha, Podolec, Sokołowski, and Zając, 1988). In addition, the analysis of the total number of Internet users aged 55-75, broken down by gender, in all the European countries selected for the study covering the period 2005 – 2018 shows a considerable growth in Internet usage. The graph below presents the trend.

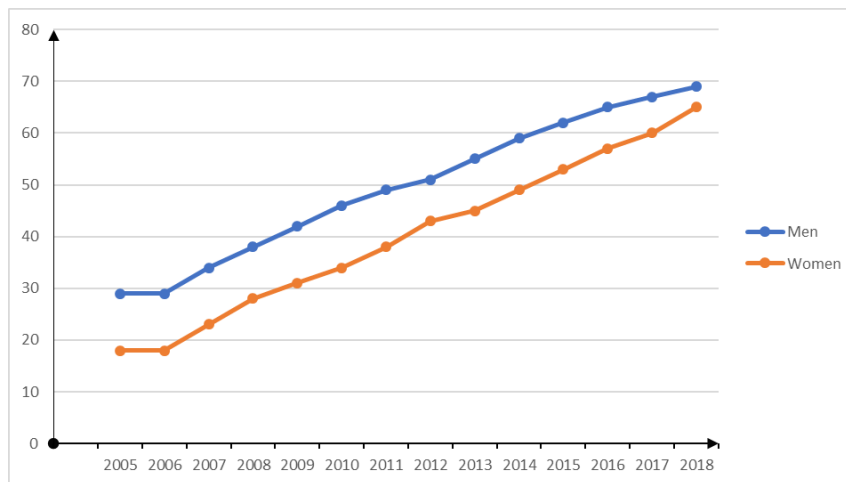


Figure 1: The number of Internet users - 55 to 75 years old (2005-2018) (based on own research)

Concurrently, the total number of individuals (in the European countries) who have never used either the computer or the Internet decreased significantly.

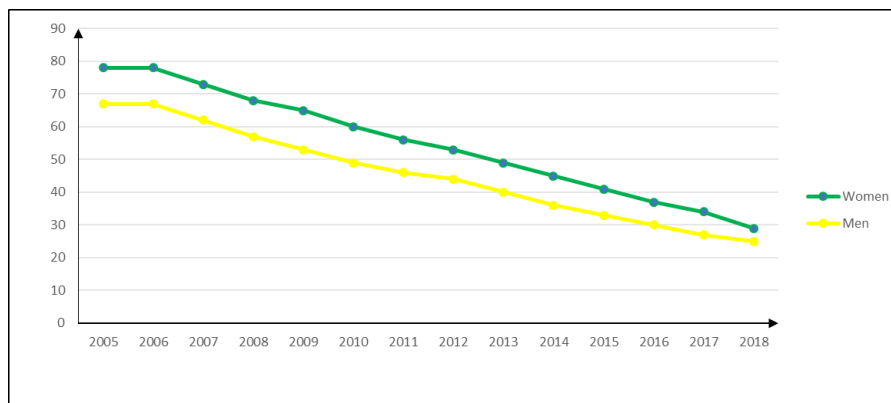


Figure 2: The number of individuals (in the European countries) who have never used either the computer or the Internet - 55 to 75 years old (2005-2018) (based on own research)

We can observe a rise in the number of older adults making payments via the Internet.

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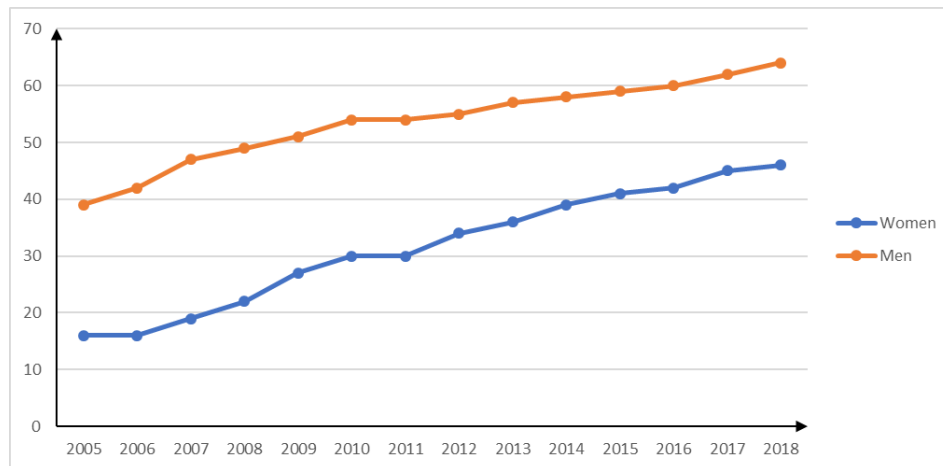


Figure 3: The number of older adults making payments via the Internet (2005-2018)  
(based on own research)

The same trend is visible with respect to the number of emails they send and receive on a daily basis:

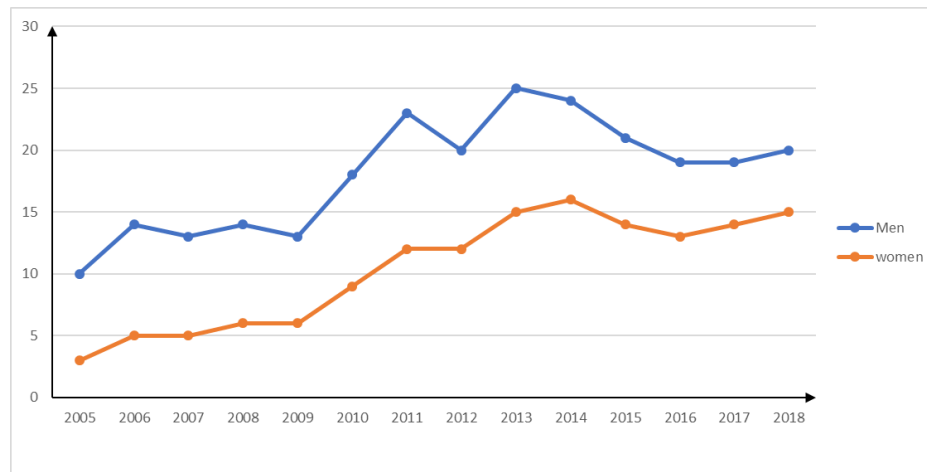


Figure 4: The number of older adults who send information via the Internet (2005-2018)  
(based on own research)

#### 4. CONSLUSION

The comparative analysis performed by means of the Ward's method enabled the examination of the level of Internet and new technology use by men and women aged 55-75 in selected European countries. The study aimed to make a comparative analysis of the phenomenon by gender in the years 2018, 2012 and 2007. The results indicate that as far as men are concerned, in each of the years, the highest levels were always observed in the clusters composed mainly of the Scandinavian and Benelux countries. Each year, the first groups comprised the following countries: Denmark, Luxembourg, Netherlands, Finland, Sweden, United Kingdom, Iceland, Norway. The analyses of female users show that in the years 2018 and 2012 the groups with the highest level consisted of the Scandinavian countries, and thus the results are similar to the ones obtained for male users. In 2007, the first cluster included also: Germany, Ireland, France, Austria. The study confirmed that the Scandinavian and Benelux countries have highly developed technology in place. They also rank very high among European countries in terms of human development, which is reflected in the indices of the United Nations Development Programme. These two factors contribute to great development potential of their societies, offering plenty of opportunity to senior citizens in particular.

The groups with the lowest level of Internet and new technology use, in the case of both men and women, were mainly made up of: Bulgaria, Greece, Croatia, Portugal. These countries rank also relatively low in Human Development Index scores.

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## **BASIC MANAGERIAL SKILLS OF GRADUATE STUDENTS OF ECONOMICS AND INFORMATICS: CASE STUDY**

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### **ABSTRACT**

*Possessing managerial skills is very important in the entrepreneurship process and a lot of success factors of the business itself depends on the level of development of those skills. The lack of managerial skills leads to failure of companies. In this paper, we are exploring basic managerial skills of final year graduate students of Informatics and Economics. Those fields are part of social sciences and are considered as leading factors in the process of establishing new enterprises. Our sample consists of 116 students from one of the faculties of the University of Zagreb, Croatia. Data was collected through a questionnaire divided into three groups: general data about the respondents, managerial skills and entrepreneurial intention. The study aims to identify differences between two study programmes, Informatics and Economics, based on their grade in developing those skills. Those studies have different curricula and obligations within every course. Five hypotheses were formulated regarding the differences in the level of development of general managerial skills, interpersonal managerial skills, communication managerial skills and group managerial skills between students of Informatics and Economics. Analysis was performed by means of descriptive statistics and cluster analysis. The results show that students of Informatics have higher development of basic managerial skills, specifically group skills, even though students of Economics study about those skill more extensively than the students of Informatics. The results show that there are important external factors which accelerate the development of basic managerial skills and the curriculum is one of many internal factors. In the future research we will consider bigger sample to increase representativeness of the results and include students of various studies.*

**Keywords:** *business success, managerial skills, study of Informatics, study of Economics*

### **1. INTRODUCTION**

Technology and its development are very important in many areas of industry and entrepreneurship, where we can see progress in the enterprises engaged in IT activities. Basically, there are some areas, like economy and informatics, where we can see growth of new businesses, especially in the informatics sector. When talking about economy sector, economists need to be aware of the technology benefits, especially in the digital economic era in which traditional economy and the use of digital tools are combined, as well as FinTech approach which includes technology development aimed at improving the financial sector. Some areas close to informatics and economy sectors need management and managerial skills or possession of a required level of managerial skills in order to establish a new company and make it successful in the first year of business. Unfortunately, the research shows that most of the newly established companies fail in the first year of business because the managers lack

certain level of managerial skills. In this paper, we provide results of a study that was primarily aimed at exploring the level of development of basic managerial skills of graduate students. Those graduates are part of the studies belonging to social sciences and are considered as leaders of the process called establishing new enterprises. Managerial skills mentioned here can be split in two categories – basic and specific. The basic ones are those that every person should develop throughout their life, no matter what job they do. There are several divisions of those basic managerial skills and Bahtijarevic-Siber et al. (2008) divide them into four groups:

- a) **Personal or general skills** – refer to specific knowledge and skills which an entrepreneur must have in order to be a successful manager and do his job. That knowledge and skills can be social, strategic and expert, but the relationship between them depends on the level of management (operational, tactic and strategic).
- b) **Interpersonal skills** – refer to social skills and predominantly to emotional intelligence (EI). According to Bahtijarevic-Siber et al. (2008), as much as 90% of the mistakes made by managers result from the lack of interpersonal skills. Sometimes problems arise within the company because an employee has personal issues and, as a result, the productivity of that employee or the whole department is compromised. To insure that does not happen, it is crucial that the manager listens to his employees, so that he can help him. According to Robbins & Judge (2013), employees know how to identify the situations where job problems can or will affect their private life, so they want flexibility in their work schedule, in order to arbitrate those two dimensions.
- c) **Communication skills** – the manager's job includes meetings, team work and other group activities. He therefore needs to know how to successfully present ideas or projects, in order to get funds needed for further development. The establishment of written and oral communication is very important, because communication skills are also linked with interpersonal skills as well.
- d) **Group skills** – in micro and small sized enterprises, decisions are often made in group, so that opinion of each employee matters. When an enterprise is changing in size, the manager may need some delegation skills in order to create several teams which can solve problems.

Unlike basic managerial skills, specific managerial skills depend on the manager's position (HRM, controlling, organizing, planning and leading). Organizing and planning skills are very similar to the basic/general manager skills, but those specific managerial skills can be trained at the work place rather than during the education process. Managerial skills are very important for some part of manager's life, but they are prerequisite for the manager's job.

## 2. RECENT STUDIES ABOUT MANAGERIAL SKILLS IN CROATIA AND WORLDWIDE

Managerial skills have been extensively explored, not only in Croatia, but also worldwide. Since the goals of the studies are not common to all cases, we chose those research studies that had the same goal as our research. According to Katavic & Despotovic (2016), managerial skills and ability to achieve company goals must be developed, but there is a common problem with the insufficient investment in the development of competency of the manager himself. This results in the lower competitive edge, profitability and innovation of that company on the market. Sometimes that development process is hindered because managers refuse to accept the offered education, as they are reluctant to sign a contract which binds them to the company. If that is the case, if they want to quit the job, they must return the amount of education cost. Several research studies were conducted in the world with the goal similar to the one presented in this paper. Kumpikaite et al. (2012) studied skills of the students who were going to be employees in international companies, with the aim to show differences between cultures, specifically, the differences between the students from Spain, Portugal, Lithuania, Turkey and

Iran. The skills were divided in four group – personal, technical, interpersonal and concept skills. The highest grade was below 3.00, which was very low and showed that those selected skills were underdeveloped. Some of those skills are examined in this paper and the results are shown in Chapter 4. Senova et al. (2015) researched managerial skills of students with the goal to make connection between the development of managerial skills and the success at college. The point of research was to check if the final-year students had the required skills that they could offer to their future employers and whether those skills were even wanted on the labour market. On the other hand, there are research studies that deal with each of the basic managerial skills, like Garaca et al (2011), who said that development of communication skills is crucial for managers' success and that managers spend about 80% of their worktime communicating with associates or with their superior. According to Robbins & Judge (2013), if a manager develops his or her interpersonal skills, this can attract and keep efficient employees in the company. According to Kaushal (2016), persons who love team work and feel comfortable working in a team are considered as desirable employees. The results of the abovementioned studies show that students' managerial skills are not developed enough and that this could be one of the reasons why newlyfounded companies are not successful right away. That hypothesis will be checked in this paper. We intend to check if final-year graduate students have enough developed skills to establish their own company and manage it. Another question arises as well – will students become good managers in the future in someone's company, if their basic managerial skills are not sufficiently developed? In this research the authors wanted to determine the development level of managerial skills of two clusters – Informatics and Economy, with the goal to compare differences between them. Additionally, we wanted to see if there is some segment of the basic managerial skills which should be improved through the curriculum. Those clusters were chosen because managerial skills are very important in the business sector, as well as in informatics sector. It would be interesting to see the results, because it is expected that they would have one of the highest results due to the curriculum. Another goal of this study is to give recommendations based on the results to prepare students for the labour market and to find a proper way to increase the development level of managerial skills.

## 2.1. Introduction to hypothesis

The main goal of this study is to compare the differences in the development level of basic managerial skills between two chosen clusters and to establish if there is some segment of managerial skills which needs to be improved through the curriculum. The differences between the two chosen clusters can be identified by monitoring their behaviour, but also their work environment. The economists are expected to have a higher development level of managerial skills because economy and management will be their workplaces in the future and they have much more occupational courses in college, including managerial skills, than the Informatics cluster. On the other hand, Informatics cluster has somewhat different courses, including technical skills. That is why it is expected that Economics cluster will have a higher overall development level of managerial skills than Informatics cluster:

**H1:** Economics cluster will have a higher overall development level of managerial skills than Informatics cluster.

When comparing the curricula and work environment of both clusters, a difference is noticeable in the area of abstraction of some courses (from the students' point of view) between those two clusters. In Economics cluster there are some courses which the students find abstract, although those courses are occupational ones. The reason is that economists do not get enough chances for practice where they could apply their theoretical knowledge, or they do not take all available

opportunities. In Informatics cluster there is not so much abstraction in the courses, because they have a lot of extracurricular activities where they can apply their theoretical knowledge (e.g. hackatons). Based on that, it can be assumed that Informatics cluster will have a higher development level of general managerial skills than Economics cluster.

**H2:** Informatics cluster has a higher development level of general managerial level than Economics cluster.

Furthermore, the students of informatics mostly work alone or in separate teams (they divide assignments between them and then every individual solves his part of the assignment), whereas students of economics mostly work in teams. This opinion and observations may stem from the gender issue, since the majority of students of Economics cluster are female. Team work also requires more interpersonal and communication skills, thus Economics cluster should have a higher development level of those particular skills.

**H3:** Economics cluster has a higher development level of interpersonal managerial skills than Informatics cluster.

**H4:** Economics cluster has a higher development level of communication managerial skills than Informatics cluster.

Although Economics cluster works more in teams, as said before, Informatics cluster uses more extracurricular activities and they may have a higher development level of group managerial skills than Economics cluster.

**H5:** Informatics cluster has a higher development level of group managerial skills than Economics cluster.

### **3. METHODOLOGY**

#### **3.1. Respondents**

The measurement tool used in data collecting was a questionnaire based on which the respondents of the final-year graduate students of Economics and Informatics provided their responses in 2018, at one of the Croatian faculties. A total of 120 questionnaires were collected, out of which 116 of were properly filled out and then used in further analysis. In order for the hypothesis to be proven or denied, the respondents were divided into two groups or clusters – Economics and Informatics. The percentage of answered questionnaires in Economics cluster was 81.61% and 73.77% in Informatics cluster. Overall, 71 questionnaire were collected in Economics cluster and 45 of in Informatics cluster. Table 1 shows general characteristics of the clusters.

*Table following on the next page*

Table 1: General characteristic of clusters

Variable	Group	Cluster			
		Informatics		Economics	
		N	%	N	%
Gender	Male	39	86.67	15	21.13
	Female	6	13.33	56	78.87
	$\Sigma$	45	100.00	71	100.00
Age	22-24	34	75.56	63	88.73
	25-29	11	24.44	8	11.27
	$\Sigma$	45	100.00	71	100.00
Most frequent grade during studies (1-5)	2	0	0.00	1	1.41
	3	34	75.56	34	47.89
	4	9	20.00	33	46.48
	5	2	4.44	3	4.23
	$\Sigma$	45	100.00	71	100.00
Subjective grade of your success in college (1-5)	1	0	0.00	0	0.00
	2	0	0.00	0	0.00
	3	10	22.22	15	21.13
	4	25	55.56	50	70.42
	5	10	22.22	6	8.45
	$\Sigma$	45	100.00	71	100.00

(author's creation)

### 3.2. Methods – questionnaire

The questionnaire itself was divided into three groups: (A) general data about the respondents, (B) managerial skills and (C) entrepreneurial intention. The first part of the questionnaire was about general data about respondents like age, gender, graduate study (to form a cluster afterwards), most frequent grades during studies and to what extent their grades matched their success in college. The second part of the questionnaire had 24 claims which represented groups of basic managerial skills and the respondents answered with Likert scale item (1 – 5). Out of 24 questions, six questions referred to each basic managerial skill (general, interpersonal, communication, group). The questionnaire was drawn up on the basis of several sources and questions were selected from or customized according to various questionnaires found in the book of Bahtijarevic-Siber et al. (2008). Some of the statements from the book were customized to our respondents and the goals of the study. Other sources were scientific papers with goals similar to ours, like Senova et al. (2015), Poloski Vokic et al. (2006) and GEM youth perspective (2015). The goal of the third part of the questionnaire was to examine entrepreneurial intention and other entrepreneur-related questions, like the possibility to establish a company in the next year, work experience in Croatia and abroad, their role models in entrepreneurship, thoughts about entrepreneurial climate in Croatia and how the respondents assess their entrepreneurial knowledge. This part had 12 questions, of which two questions had multiple answers and others just one. Questions were of the closed type and most answers required "Yes" or "No".

## 4. RESULTS

Respondents were final-year graduate students divided into clusters – Informatics and Economics. There were 116 respondents and they answered to a set of statements. The level of development of their managerial skills was calculated on the basis of their answers. Tables 2 and 3 show statistical indicators of the second part of the questionnaire.

*Table 2: Statistical indicators – age and development level of managerial skills – Economics cluster*

Statistical indicator	Age	Development level of general managerial skills	Development level of interpersonal managerial skills	Development level of communication managerial skills	Development level of group managerial skills	Overall development level of managerial skills
Mean	23.48	3.69	3.72	3.59	3.74	3.68
Standard deviation	0.89	0.51	0.54	0.61	0.63	0.46
Minimum	22	1.5	2	1.17	1.5	1.54
Maximum	27	4.67	5	4.83	4.83	4.54
Median	23	3.67	3.67	3.67	3.83	3.67
Mode	23	3.50	3.83	3.5	3.83	3.50

*(author's creation)*

According to data in Table 2, the respondents in Economics cluster are 23.48 years old in average. The most developed managerial skills are interpersonal and group skills, but the levels of development are slightly asymmetrical because the mean is higher than median, except in the case of the development level of communication skills. Overall development level of managerial skills is graded above 3.00, but it is lower than the one in Informatics cluster, shown in Table 3.

*Table 3: General statistics indicators – age and development level of managerial skills – Informatics cluster*

Statistical indicator	Age	Development level of general managerial skills	Development level of interpersonal managerial skills	Development level of communication managerial skills	Development level of group managerial skills	Overall development level of managerial skills
Mean	24.11	3.74	3.73	3.73	4.01	3.80
Standard deviation	1.52	0.56	0.53	0.60	0.51	0.44
Minimum	22	2.83	2.67	2.33	3	2.79
Maximum	29	4.83	4.67	5	4.83	4.67
Median	24	3.67	3.83	3.67	4	3.79
Mode	23	3.33	3.5	3.5	4	3.67

*(author's creation)*

According to data presented in Table 3, the respondents in Informatics cluster are 24.11 years old in average, which is higher than in Economics cluster. All levels of development of managerial skills show slightly asymmetrical distribution, except interpersonal skills. The respondents in this cluster had the highest grade in group and general skills. Overall development level of managerial skills is above 3.00. Looking at the results of both clusters, the average development level of managerial skills is higher in Informatics cluster than it is in Economics cluster, which means that in average respondents in Informatics cluster had higher level of development of managerial skills (especially group skills) than the respondents in Economics cluster. The process of comparing those developing levels of skills constitute the foundation for (not)confirming the hypotheses earlier in the paper. The hypotheses were formulated in this way because authors sought to identify the differences between the development level of those skills in both clusters, since they point at the need for knowledge of managerial skills.

It must be emphasized that knowledge of managerial skills is required for all students who want to become entrepreneurs in the future. Table 4 provide data about average development level of managerial skills for each cluster and show whether the formulated hypotheses are confirmed.

*Table 4: Average level of development of managerial skills for each cluster and hypothesis*

Cluster	Average overall development level of managerial skills (H1)	Average development level of general managerial skills (H2)	Average development level of interpersonal managerial skills (H3)	Average development level of communication managerial skills (H4)	Average development level of group managerial skills (H5)
Informatics	3.80	3.76	3.7	3.75	4.03
Economy	3.68	3.69	3.7	3.59	3.74
Hypothesis confirmation	No	Yes	No	No	Yes

(author's creation)

Of all five formulated hypotheses, only two were confirmed. Overall development level of managerial skills of Informatics cluster is higher than one of Economics cluster, meaning that the respondents in Informatics cluster have higher development level of managerial skills. The development of group skills is much higher in Informatics cluster and, consequently, hypothesis 5 can be confirmed. Such result has definitely contributed to the higher level of overall development of managerial skills of that cluster. Informatics cluster has higher development level of communication managerial skills than Economics cluster and hypothesis 4 can be denied. Also, Informatics cluster has higher level of general managerial skills and hypothesis H2 can be proved. Earlier in the paper it was mentioned that main differences between the two clusters refer to the percentage of managerial subjects in the curriculum, the share of teamwork and the percentage of participation in extracurricular activities. Regardless of teamwork and participation in extracurricular activities, the development level of managerial skills is not on the level set in the beginning. Consequently, it is assumed that development of managerial skills within the education system does not depend only on the quality of that system and the curriculum, but on external factors as well (e.g. proactivity of the students, use of opportunities in college, work experience and reading of relevant books). As for the differences between genders in this topic, there are no significant differences in terms of development level of managerial skills.

## 5. CONCLUSION

The research was carried to enable the authors to evaluate the development level of managerial skills since they seem to have a big impact on business, especially newly founded ones. We see a particular problem within both clusters since they still have lower development level of managerial skills, which raises the question whether they can be successful managers in the near future. According to the average results, group managerial skills are the most developed in both cluster (average grade is 3.84). Informatics cluster has higher average grade than Economics cluster as regards communication managerial skills, and also the overall development level of managerial skills. All results calculated in this study belong to grade groups 3-4 and 4-5, which are above average when comparing them with recent studies. Out of five formulated hypotheses, only two of them were confirmed – H2 and H5. It can be concluded that the development of group skills are graded higher than other skills because there are a lot of seminars and project assignments where teamwork is mandatory. Also, it is not always possible to successfully communicate in teams, so the development of communication skills is lower. It was identified that the share of teamwork and the use of opportunities are not the only factors impacting the development of managerial skills, and that certain external factors play a

significant role (proactivity of students, work experience and reading of relevant books). Also, some weak points were identified in the area of managerial skills of students so here are some recommendations for improvement – increase the number of situations which require negotiation, talk with other people inside the team about their effort, move to areas where you can develop a network and bigger organization in planning curricular activities. In their research authors were faced with certain limitations, the most significant being the questionable sincerity of the students and a small sample, and for that reason the results cannot be mapped to the whole population. Therefore, further researches should consider ensuring a more representative sample in order to provide more reliable results and also include students of diverse studies, so as to form multiple clusters.

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## MODERN MANAGEMENT AND INOVATIVE ORGANIZATIONS

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### ABSTRACT

*Knowledge is the most important development resource of the world economy. The efficient use of knowledge management is achieved by an effective business strategy. Proper direction of learning and knowledge is the basis of the organization towards the realization of the set goals. Modern organizations are transformed into knowledge creators, their employees are transformed into knowledge workers, and knowledge management becomes a basic organizational framework of modern business. So, to empower organizations to achieve an atmosphere of competition, success and progress, means "to equip" their employees for the new knowledge era. Management is constantly changing. Efficient operation becomes requirements and aim. Vision of a whole company becomes essential. Middle management gets constantly conjunction with senior management. Vision is needed because it push individuals to realize further business operations. Business is constantly learning. Most often the young people are with no experience and practice. The biggest problem is that they show only the standards of their country and time to manage. It is important to look outside and get to know the business of other companies in order to improve its operations. New resources are becoming dominant in all industrial and service branches. This means a change in business philosophy and strategy, and maximum improvement of human resource management. International competition and the degree of used technology greatly accelerates the level of organization in the future. Global market and its growth is a reality and a success of the company become needs and desires. New learning organization will accelerate middle management. Emphasis will be placed on processes rather than tasks, and adaptation to change will be the most important thing.*

**Keywords:** *Management, Knowledge, Education, Inovative-learning organization*

### 1. INTRODUCTION

Management is a complex (also successful) process of managing different organizations, ventures and processes. If we look at it as a system of government or as a group of people who run, who have the authority to manage affairs and other people, we arrive at a conclusion about the necessity of understanding its essence. It is this essence that can be understood as complex for the simple reason that it is made up of people. Management is learned as well as all other sciences. Learning can be done in different ways, however, the most effective way is to study other people's experiences. So far, it has been shown through practice and experience, that figuratively speaking, one who wants to become a good "toreador" must have been "bull" before. If it's just a bull, it does not mean it will be a good toreador and vice versa. So there should be a lot of those who will try to be good leaders, but only a few will distinguish who will become.

Motivating as many people as possible to deal with the managerial profession is the first condition for a successful economy and business. In doing so, it must be borne in mind that business is everything we do and how we make money, which can be: production, buying, selling, religion, painting, education, etc. In each of these areas, there must be top experts and professionals, people who are able to do the work in the right way and achieve the set goals (Sajfert, pp. 95, 2004.). Examples and experiences of individuals and organizations, as well as teams, are the best way to see successes leverage. Regardless of the area in question, the paths to success from the managerial position are almost universal, but also specific. They are universal in that sense, that every success presents a great persistence, a good relationship among people, teamwork and a high level of professionalism. Specifically, each success in itself carries something characteristic in relation to the area in which it is achieved. The beginnings of management date back to 5000 BC. from the old Sumera, after which the first letters of a kind of organization were found. The continuity of the development of management goes further through ancient Egyptians, Jews, Chinese, Greek, and until the XIX century, from when it begins to acquire its true meaning and from when it becomes a scientific discipline. Thus, the emergence of numerous "modern" concepts and practical applications of management dates back to the period of ancient civilizations. Solomon, the famous biblical person, was guided by the founding of trade agreements, managed projects of building objects and modelled peace agreements as early as the 10th century BC. Even before the advent of Solomon, there was a need to find out some way or system for managing and managing people. This is also evidenced by the fact that many celebrities who belonged to ancient civilizations used their confidential people to fulfil their desires, giving them the necessary authority and necessary authority. As the power of these bosses grew, so their position strengthened and they eventually became both "earthly" and spiritual leaders of the people. From all of the foregoing, it can be said that management was created from the moment when man began to adapt nature to himself, firstly in the form of skill, and much later, as a new scientific discipline. Many theoreticians and practitioners have played a major role in the founding of management as a scientific discipline, among which the most important are A. Fajol and F. Taylor. By their work in "scientific management" or "scientific organization of work", they have contributed to the development of management out of skill in the scientific discipline. For the functioning, growth and development of an organization, management is necessary, that is, setting goals and achieving them. Contemporary society is characterized by large and fast changes in technology and technology, and therefore a great uncertainty of business. That is why it is necessary to realize, set up the tasks with a good understanding, planning and orientation of all the individual activities and the whole process. The very concept of management is the continuous effect of the control actions affecting the parameters of the system, and the system translates from one state to another. At this time, "time" is the basis of a competitive fight, because it is faster "eating" slower. The goal is to achieve "record time" at the right place, so it is imperative to manage. It is precisely here the importance of management, a science that deals with management. Management cannot be left to intuition but must be thoughtfully thought to be more efficient and effective (Jovanović, Langović, 2001).

## **2. INNOVATIVE PARTICIPATION ORGANIZATION**

Successful organizations have their future to build on the efficiency and the high performance of all their units. This also requires greater collective intelligence based on knowledge, competence and understanding. Such an organization that learns faster than the competition can be called or described as an apprentice organization. The basic assumptions on which the idea of learning organizations are based are: there are no limits to the future, there are no limits to human imagination, there are no limits to our ability to move, there are no limits to our ability to improve, there are no limits for our will to achieve, there are no limits to our dedication to

serving, there are no limits other than the ones we set ourselves, there are no limits (Nokia Company Report). The innovative organization will adapt to a strong change of pace and will become more like a living organism that can manage its functions. It will dynamically manage the knowledge, ie it will aim to know, understand, apply and develop according to the needs of the situation. The essence is in the effective application of knowledge, ie to be able to extract the maximum value. Peter Draker compared the organization with the jazz orchestra - in the sense that music is created while playing, therefore, not with pre-made partitions. The learning organization improves and continually changes. To a comprehensive solution on the way to the goal, one can come in different ways, but the means to reach the goal can be constantly changed. It can be said that the learning of the Organization is developing through certain phases (Figure 1 Evolution of Learning Organization) (Jovanović, Kulić, Cvetkovski, 2004). The first phase describes a traditional hierarchy in which top managers retain centralized control over actions within the organization and also control the strategy, including customer relations and the environment. In the second phase of development, top managers are turning to empower employees, giving employees the responsibility for current work decisions and actions. Stage three occurs when employees are involved in setting up a strategic business direction. Employees working with customers or other parts of the environment are making choices about the company's strategy and tactics that should secure success in that environment. Employees were no longer a factor in more efficient products than routine tasks. The strategy stems from the accumulated activity of the employees' teams. Employees working within the general vision and diversity of organizations that adapt and change independently, while at the same time contributing to the wrong assessment of the company. In a given sense, the emergence of learning organizations increases the company's knowledge base. Employees participate in all activities that require thinking, including strategy, a very small limit between employees and different departments or between top and bottom.

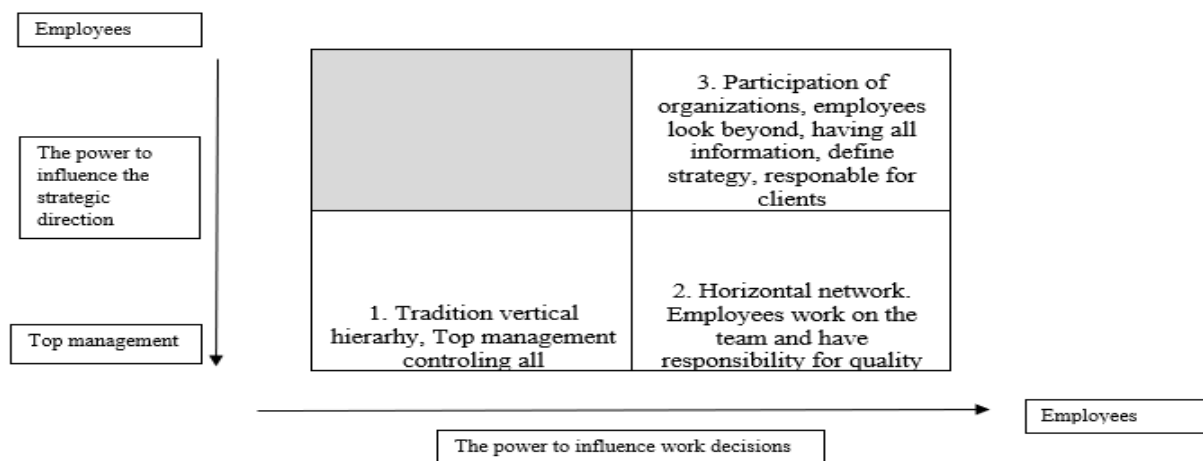


Figure 1: Evolution of participation of organization (Jovanović, Živković, Cvetkovski, 2003)

The characteristics of the innovative organization are: it is constantly evolving, new competence centres are connected while the old ones are being removed, some parts are deliberately temporary. There are functional and hierarchical lines to which different organizational models are linked. An innovative organization is managed with a clearly defined set of values in the head. The structure of the learning organization - is based on the concept of continuous improvement and quality management is embedded in all processes and modes of operation. It represents a modern virtual team and process organization. The learning organization will invest a lot in performance management, which represents a base in other

processes at different levels of the organization. They all communicate and work together, creating enormous intelligence and flexibility to deal with an environment that is rapidly changing. The project organization implies the introduction of specific changes in leadership, horizontal structure, and empowerment, exchange of information / information, strategy and organizational culture. Competence management and knowledge management are an essential part of performance management. Performance management ensures that goals are achieved, competency is systematically evolving, and knowledge is available to everyone in the organization. The learning organization has clearly defined processes based on the needs of consumers. The organization defines its essential and supportive processes that are constantly updated. Employees are the company's most important resource, and great attention is paid to human resource management. Special attention is paid to the competence and motivation of employees. Since an innovative organization works in teams, much attention is paid to the management and organization of these teams. The organization defines its model for teamwork, checks how it works and builds a reward system based on it. An innovative organization systematically collects a backbone. Fidbek systems work throughout the organization, and fibre is considered a condition for all learning, development and change. Fidbek culture should also support an open dialogue, which means an open discussion that promotes the best ideas. Such an organization efficiently uses information technology. The use of information technology brings with it a whole new value creation (Kaplan, Norton, 2000). Company operations manage Enterprise Resource Planning, which combines all functions in an organization. Management is considered a service function, with the task of organizing the successful work of the organization. As the most important line of the learning organization, readiness to change and renewal, even when there are no immediate conditions for change. Every employee is ready for a new approach and does not only strive for what he always did. In the learning organization, there must be the following types of (Jovanović, 2004) :

- Management: visionary management - gives purpose to our action and answers the question why,
- Strategic management - gives direction to our action and answers the question of what,
- Performance management - leads our everyday actions and answers the question of how,
- Self-guidance - allows action at the individual level and answers the question with which energy.

Of the aforementioned management types, the greatest attention should be paid to performance management. Performance management falls within the basic level of management. One of his key tasks is to support organizational learning. As such, it would have to enable not only an understanding of the environment but also environment management (control over the process of change). Human Resource Management represents an inseparable component of performance management and as a vision it has the following: to make efficient organizations competitive, to enable organizations to be successful in the future, and to make good organizations motivate their employees in a way that will enable them to maximize their energy. An intelligent organization should strike a balance between these factors. Human resource management would thus gain new roles in an organization such as (Jovanović, Živković, Cvetkovski, 2003):

- The executor, a worker who performs the functions of the administration of human resources,
- The developer takes care of the competence and motivation of employees,
- Innovator, implement changes, Vizionar - looking for new directions and perspectives that are in the veils with a strategic and visionary method.

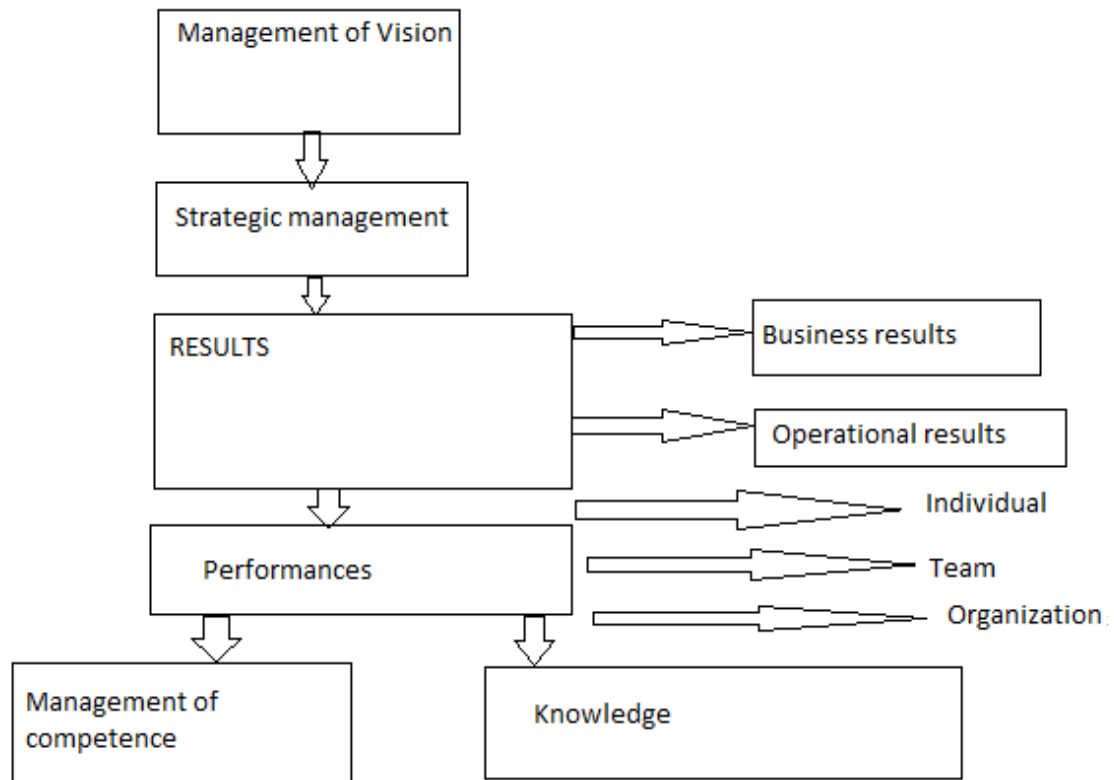


Figure 2: Management of knowledge organization (Kaplan, Norton, 2000.)

### 3. MENAGEMENT IN EDUCATION AND PROGRAM OF MORE MANAGEMENT

A new development on the management horizon, appeared in 1881 when the manager as a discipline was introduced into education. Noting the need for managerial staff training, Philadelphia Financial Expert, Joseph Worton donated \$ 100,000 to the University of Pennsylvania to set up a department where young people would be educated and trained for managerial careers. Vorton thought that an educated person would be more complete in his knowledge if, in addition to the knowledge of several professions for which young people were prepared at that time (lawyers, doctors, priests), he added management to expand his educational biography. It was thus founded "Vorton School", the first in a series of educational institutions where he studied management as a science. Until 1898, it was the only school of that type, while Universities in Chicago and California did not establish their "first business schools". By the year 1911, 30 other institutions were established. The higher management program is based on the principle that academic knowledge can be reached with a pragmatic (useful) approach in order to create a rounded and enlightened leader strain. An example of this is Harvard, where every spring and fall selected attendees to arrive to participate in an extraordinary school for business combat. They are sent by prestigious companies and pay tuition fees so that selected participants get to know the best practices of the best companies, led by the best professors, and enrich their knowledge with the experience of their older colleagues. In such an environment, students learn how to overcome established beliefs, understand and gain new abilities and perspectives. The program highlights five skills useful for practical application of the curriculum, namely (Jovanović, Kulić, Cvetkovski, 2004):

1. Deciding and motivating people,
2. Providing organizational skills,
3. Successful competition in a global society,
4. Improving quality, productivity and teamwork,
5. Understanding modern business finance.

Unarmed with this knowledge and skills, students can be trained in managing a department, a business unit or a whole company. The senior management program is focused on the real world. It is based on a lifelong experience that has been acquired through difficult market temptations and company management. Senior Management Program should, therefore, be taught by prominent professors and eminent and educated lecturers and experts. Students of such a program learn the strategy and tactics for winning on today's global business warfare scene, as well as for winning in internal wars with colleagues of the same rank, ambitious scouts and bosses. This knowledge is useful for every manager in the conditions of modern society and at every level of his career. This is an American example of training managers. Training managers are different from culture to culture (Cvijanović, 2004).

#### **4. KNOWLEDGE AND KNOWLEDGE MANAGEMENT**

Frances Beckon said: "Knowledge is power," modern managers say, "Knowledge is money." Knowledge creates money in different ways. It can be translated into good marketing, good design, satisfied customers and better products. In order to speak at all about knowledge management, it is necessary to analyze and define the term "knowledge". Numerous thinkers and practitioners could not reach agreement on what exactly is meant by knowledge and where the limits of knowledge are in terms of distinguishing it from close categories such as data, information, and wisdom. Of all the above, it is most difficult to draw a clear boundary between knowledge and information, since these two categories are interconnected and often used as synonyms. Therefore, it is necessary to define the following three terms: information, knowledge and wisdom. The information has to do with describing, definitions or perspectives. Knowledge includes strategy, practice, methods, or approaches. Wisdom embodies principles, insight, morality or archetype (Bellinger, 2004). Knowledge management is a systemic process for collecting, organizing and communicating employee knowledge so that other employees can be used to improve the effectiveness and productivity of their work (Alavi, Leidner, 1999). The most important division of knowledge from the aspect of the knowledge management strategy is the one that distinguishes between implicit (tacit) and explicit (explicit) knowledge. Explicit knowledge is what knowledge can be expressed in a formal language and exchanged between individuals. Implicit knowledge is individual, individual, and involves intangible factors such as personal beliefs, perspectives, and values to manage implicit but explicit knowledge (Murray, 2000). The reason lies in the fact that implicit knowledge is neither written nor is it an inseparable part of every person who owns it. It is transmitted by speech, mutual discussions, open suggestions and for its transfer, it is necessary to desire and willingness to transfer to other drugs. This fact raises the question of how to manage it in cases of employee fluctuation or retirement. In these situations, the workers carry with them some of the knowledge they acquired in the given organization. In order for acquired knowledge to belong to the organization, it invested resources and time to create it. Such knowledge is necessary to remain in the organization even after the departure of employees who own it. It is inherently invisible. It is, therefore, necessary for organizations to strive to write such knowledge, i. transforming the implicit into explicitly, so that it will remain in it even after the departure of employees, ie permanently preserved. Recently, the notion of capital and value creation was in the sphere of money, material resources, accounting and finance, as well as experts from those areas. Today, at the station of people and their knowledge, creative and developmental resources (Drucker, 2005). The battle for talent becomes the sharpest form of competition, so strong that some mark it as the third, for economic prosperity, the most important, world war that will mark the third millennium. Treatment of people in the process of work as a resource makes the process of managing its use and development very complex. Just doing your job is not enough in the conditions of modern business. With the beginning of a job, it does not mean that this is the highest goal that an employee has achieved, on the contrary, it should mean

starting work on expanding specific knowledge in the field of work that the employee is dealing with. Through constant learning and improvement, the goals of the company become the goals of all employees in it. It is, therefore, necessary to define some concepts that are often used as synonyms for knowledge (Kaplan, Norton, 2000):

- Learning is a process of acquiring skills and knowledge that results in a relatively lasting change in behaviour.
- Training means the acquisition of new practical knowledge and skills necessary for the operation, management, management of the organization, according to established rules, regulations and standards. Training leads to changes in skills.
- Training is the practice of acquiring practical knowledge and skills • By transferring knowledge into an essential resource, human resources management faces new demands, new challenges and new responsibilities.

The challenge for those who manage knowledge is twofold - they need to implement a system that will regulate the flow of information so that employees can access specific knowledge important for their work and create processes that will enable individuals on various business functions to share knowledge and practical use it. Knowledge is thus generally defined as:

- Facts, information and skills that a person has acquired through experience or education; theoretical or practical understanding of an object,
- The totality of everything known in a field; facts and information,
- Awareness acquired through the experience of some fact or situation.

Companies have always found it hard to balance pressing operational concerns with long-term strategic priorities. The tension is critical: World-class processes won't lead to success without the right strategic direction, and the best strategy in the world will get nowhere without strong operations to execute it. In this article, Kaplan, of Harvard Business School, and Norton, founder and director of the Palladium Group, explain how to effectively manage both strategy and operations by linking them tightly in a closed-loop management system. The system comprises five stages, beginning with strategy development, which springs from a company's mission, vision, and value statements, and from an analysis of its strengths, weaknesses, and competitive environment. In the next stage, managers translate the strategy into objectives and initiatives with strategy maps, which organize objectives by themes, and balanced scorecards, which link objectives to performance metrics. Stage three involves creating an operational plan to accomplish the objectives and initiatives; it includes targeting process improvements and preparing sales, resource, and capacity plans and dynamic budgets (Kaplan, Norton, 2008).

## **5. THE SKILLS OF MOTIVATION OF PEOPLE**

Motivation is the process of initiating human activity, which is directed towards achieving certain goals. Work motivation implies the totality of different methods and processes of causing, maintaining and stimulating behavior, which is aimed at achieving certain work goals (Jovanović, 2004). Leaders who can communicate among members, i.e. People in the collective are leaders of the best departments, business units and company teams. Such leaders know how to involve their employees in teams and motivate them to outperform the performance, which they would achieve under the guidance of less skilled hands. Human capital has being paid more attention in the workplace as well. Along with the belief of education about improving workers' productivity, many researchers stress the importance of education and training in the human capital field (Griliches & Regev, 1995; Rosen, 1999). There is an immediate causal link between the attitude of people towards their managers and their performance in the work. If in this paper there were already words about an innovative, learning organization, it can be concluded that the motivation skills play an important role in such a system.

People need to be motivated by offering them to do what is rewarded or paid. The fact is that the behaviour of people in the company can be divided into the necessary behaviours, in order to achieve the company's goals and the rewards that are rewarded. The biggest problem of management is to combine the necessary with the behaviour that is rewarded. This problem is usually difficult to solve, it actually belongs to the unsolvable. Rewarding for work can be material and moral, and therefore motivation can be divided into Material and Moral Motivation. Moral motives turn into the material in the consciousness of employees, and therefore, material motivators have incomparably higher motivation power. This is also evidenced by the story given in the enclosure of this paper. Moral motives can also be called collective motives, while material things are also called personal motives. In developed Western countries, and especially in East Asia (Japan), collective and personal motives are crossing successfully. "A heart-hymn to the company of a Japanese worker means his complete loyalty to collective goals - but through the success of his company - he will accomplish many personal and material goals" (Jovanović, 2004). It can be said that the following approaches are dominant in the research of the issue of motivation: Traditional approach to motivation - promotes the thesis that workers are "homo-economists": persons whose work engagement is behaviour related to satisfying material needs. Access to human relationships - an approach that focuses on the motivation research (po) puts an uneconomical side of human nature - workers as social beings. Human resources access - an approach to motivation that promotes the thesis that workers should be regarded as integral personalities with both economic and non-economic needs, goals, and motives. Modern approach - based on the thesis that motivation is a very complex phenomenon.

## **6. CONCLUSION**

In contemporary business conditions, organizations, when they are members of a free-lance group, are increasingly educated and more aware of the importance of the work they perform, successful human resources management should try to integrate as much as possible efforts in order to increase the performance of work and care for people in the innovative-learning organization. Directing management towards employees implies an emphasized concern about interpersonal relations, employee satisfaction at work, their loyalty and membership in the organization. Thus, a good manager contributes to the greater cohesion of the group. On the other hand, by focusing on business, good management places emphasis on its activities on the financial problems of the organization. As the organization's operations are a complex activity, conditioned by both human and technical factors, successful management implies the appropriate integration of these factors. The development of an organization depends on examining the attitudes and needs of its customers or service users. Being always referred to what consumers want and expect, is the strongest tool for achieving good business results. However, a successful business involves a successful cost leadership strategy. So, to minimize costs in places and domains wherever possible, it represents the idea of a successful market leader. Therefore, all the factors that influence the organization's processes must be seen. Readiness to change and the introduction of newspapers allows us to keep pace with the modern world. Knowledge of new technologies and innovations allows improving not only the quality of business but also to reduce costs. Global society becomes a "global village". In response to great market competition, knowledge bases must be enriched at "now and here". If each company develops and strengthens its knowledge base, then the entire social knowledge would increase. For the end, it may be necessary to highlight the thought that said that if we want to survive we must adopt!!! If the system is bigger, it is easier to collapse it, or, to put it more correctly, the small system is more adoptable.

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# COMMODITY PRICES AND ECONOMIC GROWTH: AN EMPIRICAL STUDY FROM SERBIA

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## **ABSTRACT**

*This paper investigates the impact of commodity price changes on the economic growth of the Republic of Serbia in the period 1998-2017. Economic growth is expressed in annual values of real GDP per capita and foreign trade balance (export and import) of goods and services. Our basic aim was to identify statistically significant commodities, with emphases on the measurements of industrial metals prices (copper, aluminum and iron) impact on economic growth, as well as the formation of two separate multilinear regression models. Obtained ultimate models show a statistically significant impact of industrial metals global price, but also a crude oil price, on the economic growth of the Republic of Serbia. The results have their both theoretical and practical establishment, considering current economic growth and the growth of sectors of manufacturing, construction, and transportation as our country's largest manufacturers and consumers of said commodities. The study represents a starting point for further detailed research of relations between commodity price movements and macro-fundamental factors of the national economy.*

**Keywords:** *commodity prices, economic growth, foreign trade, industrial metals, multiple linear regression*

## **1. INTRODUCTION**

Many of the world's developed economies are exposed to the global market commodity price fluctuations but so are the developing and transition economies. The high volatility of the global commodity prices can cause price shocks on the local market and affect macroeconomic stability of national economies. There are numerous examples of the commodity price volatility affecting the economic growth rate, price level, trade balance and exchange rates of developing economies, especially ones that are commodity-export oriented. Serbian economy has transformed during the past few years into an economy with rapid economic growth, low and stable inflation rate, fiscal surplus, reduced public debt, and stable financial sector. Acceleration of the economic activities and foreign investment growth in the future period enable the structural reform continuance and enlargement of production activities in export-oriented industries, particularly in those with higher added values. (Narodna Banka Srbije, 2019; Ministry of Finance, 2019). The Republic of Serbia is an open market with mostly import-oriented economy, growing import value trend, and trade deficiency decrease. The author's idea and the object of this paper's research are, accordingly, the influence analyses of the global (market) commodity price movements on Serbian economy growth. The commodities chosen for this analyses make elementary foreign trade structure on the side of offer/export and demand/import in Serbia: basic metals (copper, aluminum, iron), energy products (oil and gas), and wheat. The aim of this work is to determine, based on the historical data for the 1998-2017 period, a statistically significant relationship between the movement of the commodity price and economic growth of transition economies, taking Serbia as an example. Numerous researches of the commodity price influence on the economic growth of developed economies worldwide have given positive results, while there are fewer researches for developing economies, with the opposite results (mainly for the countries of Africa, Asia, and South America). Therefore, the main purpose of this work is to provide the answer to a question how much and to what extent the movements of commodity price on the global market affect the

economic growth of Serbia, and whether it is possible to predict the trend of economic growth based on the chosen metals' – copper, aluminum and iron ore - market price movements. Specifically, we want to identify the key goods (metals) which price movements on the global market can be an indicator for the Serbian economic activity motion. In accordance with formerly stated, the work is structured as follows: in section 2 we present the basic features of Serbian economy, GDP data, GDP per capita and values of import and export for the last couple of years; section 3 gives an overview of market prices of the chosen commodities and trends for the past 25 years; in section 4 we present the most significant research results of commodity price effects on economic growth of many countries worldwide; in section 5 we give research methodology with a list of data sources and methods that will be used in the research; in section 6 we show the results, with discussion, and in section 7 we give conclusions. Finally, in section 8 we give the list of the literature used in writing this paper.

## 2. THE GENERAL CHARACTERISTICS OF THE SERBIAN ECONOMY

As stated in the National Bank of Serbia's reports, the achieved GDP has considerably exceeded expectations in 2018, with the growth of 4,4%, supported by investment growth, public consumption, and export (Narodna Banka Srbije, 2019). Macroeconomic stability of the country attributed to the growth of foreign investments, improvement of business environment, and enlargement of credit rating S&P, Fitch and Moody's. Powerful investment growth started with a new investment cycle, in 2015. According to available information, there has been an average annual investment growth of 7% for the last four years, while accumulated growth was 29,5%, which resulted in accelerated GDP and GDP per capita growth (<http://www.pks.rs/privredasrbije.aspx>). Macroeconomic stability contributed to accelerated growth of direct foreign investments and enlargement of export potentials, while the majority of investments was directed to export-oriented industries. Manufacturing industry stands out, with strong investment growth recorded in automobile, metal, food, and chemical industry. Serbian GDP per capita for the period 1998-2017 is given in Figure 1.

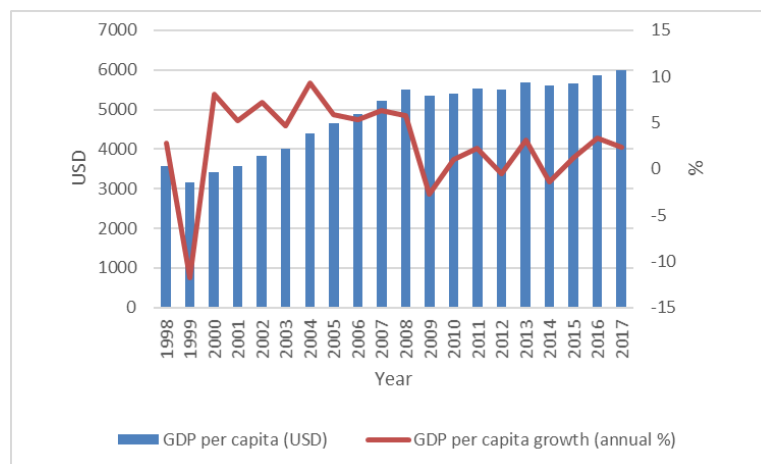


Figure 1: GDP per capita in Serbia (1998-2017)( <https://tradingeconomics.com/>)

According to the Serbian Chamber of Commerce, the ultimate result is an increase in employment, production growth, and growth of export in the manufacturing sector. Total export of goods in 2018 records an 8,7% increase, despite the decrease in demand in the EU zone, which has partly been compensated by an increase in exports into eastern European countries. The export of services records 15% growth%, with the IT sector and business services as leaders. The import also records 14% growth, with oil and gas sector making over 80% of the import (<http://www.pks.rs/privredasrbije.aspx>).

This situation with import-supported investments, as well as an oil price increase on the global market, affected the increase of current commodity exchange deficiency and participation in GDP. The National Bank of Serbia (2019) estimates the future period growth of current deficiency level, in accordance with domestic demand, investments, export growth, and oil price. As stated in available data, powerful growth in recent years is the result of accelerated activity in the sectors of service, agriculture, and construction. Analyzing many competent institutions' reports from 2018, we obtained that the GDP structure of Serbia consists of the following sectors: 1. Agriculture (participation in GDP 6,01%), 2. Industry (26,38%), and 3. Services sector (49,99%). Significant data which attributes to previously stated refers to the number of employees (labor force) by sectors: 56,6% in services, 25,6% in industry, and 17,8% in agriculture. Sectors participation in achieved GDP for the period 2007-2017 is given in Table 1.

GDP by sector (% share)	
Services	50%
Industry	26%
Agriculture	6%
Other	18%
	100%

Table 1: Serbian GDP by sector in 2018 (<https://www.statista.com/statistics/440654/share-of-economic-sectors-in-the-gdp-in-serbia/>)

Total foreign trade export of the Serbian commodities and services in 2017 was 21,86 billion US dollars which presents an 11% increase, compared to 2016. The import of commodities and services amounted to 25,30 billion US dollars, which is a 16,71% increase. Foreign exchange commodity and service deficiency in 2017 was 3,45 billion US dollars (2,44 in 2016). The coverage rate of the imports by exports is 86%, with a 2% decrease compared to 2016. The increase of foreign trade deficiency is an outcome of the energy sources price increase (oil and gas) in the first place, on which Serbian economy highly depends, relatively stable course of dinar compared to the key currencies, as well as the fact that economic growth mainly depends on the import of materials and products necessary for the investment activities and consumption, as GDP components. Trade account balance of Serbian commodity and services for the period 2012-2018 is given in Figure 2.

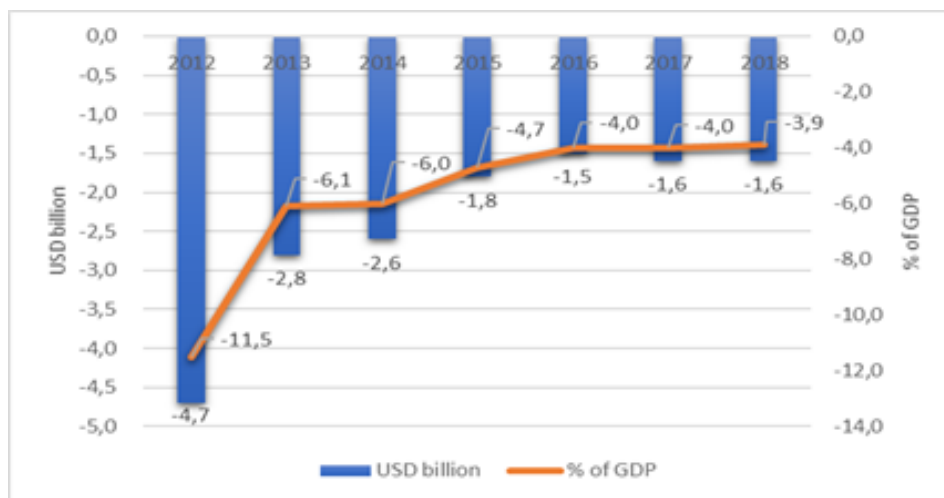


Figure 2: Trade account balance of Serbia in USD billions (2012-2018)  
(According to data from <http://www.stat.gov.rs/sr-Latn/oblasti/spoljna-trgovina>;  
<https://www.macrotrends.net/>; <https://tradingeconomics.com/>)

Commodity groups that dominate in the commodity export structure are the following: cars, iron and steel, non-ferrous metals, clothes, wheat, corn, electrical appliances and components, metal products, arms, and munitions. Dominant imports are machines and transportation gear, energy products, consumer goods, chemicals, food, and live animals. The most important Serbian foreign trade partners are the EU countries (Germany and Italy), China, and Russia (significant influence on the import side – China 8,5%, Russia 7,9% of overall exchange). Trade balance of commodity for the period 2007-2018 is given in Figure 3.

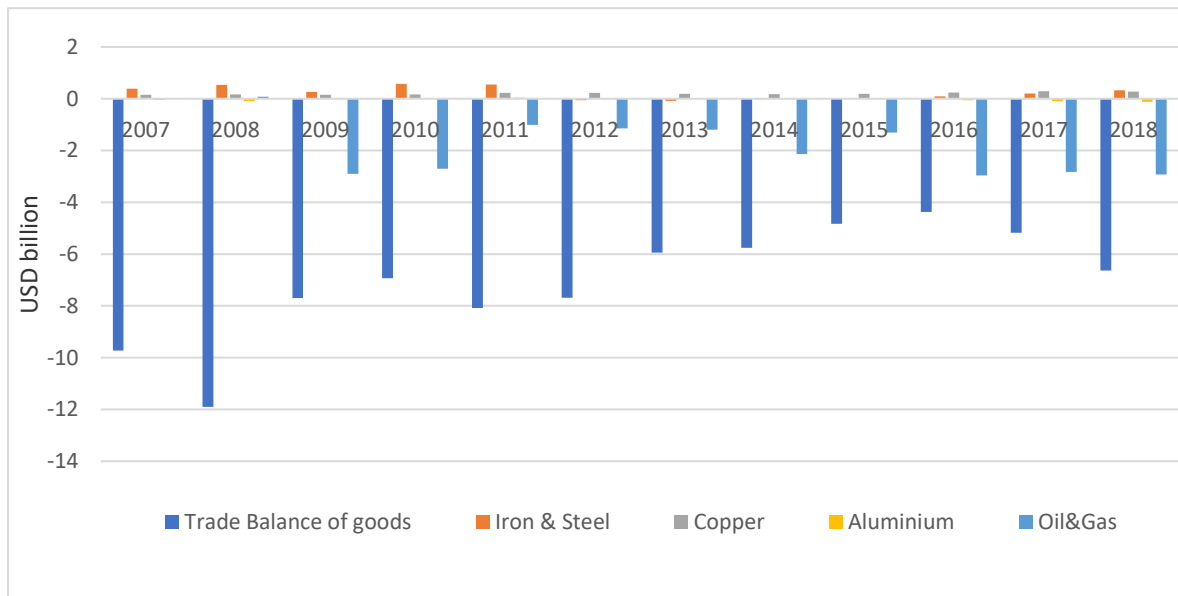


Figure 3: Trade balance of commodity in USD billions (2007-2018)

(According to data from <https://www.trademap.org/>; <http://www.stat.gov.rs/sr-Latn/oblasti/spoljna-trgovina>; <https://www.macrotrends.net/>; <https://tradingeconomics.com/>)

### 3. COMMODITY MARKET TRENDS

In the context of our research, we will provide short analyses and market price trends review of the chosen global market commodities. The commodities are base metals (copper, aluminum, iron ore), energy products (crude oil and natural gas), and wheat. Trends on the global metal market are observed on the base of the global metal price index (Commodity Metal Price Indices) and individually, for each of the metals in the 1994-2017 period. If we take a closer look at Figure 4, we can notice that the global metal market follows, with great attention, accelerating cycles and slowdown of the global economy, including some of the countries which are among greatest producers and consumers (the USA and China). After the great growth in 2002-2007, the world economic crises came in 2007/2008, with a drastic drop in prices. Market recovery followed in 2009, where the price of certain metals (copper in 2011, for example) recorded its historical maximum. A new cycle of metal price decrease followed until 2015, accompanied by a partial rise and another fall during 2017/2018. The reason for these great fluctuations is the slowdown of economic activities of today's largest economies, namely China in the first place – world's largest consumer of industrial metal and energy products, which is, after a huge activity growth, currently in the state of economic growth slowdown. We should also take into consideration political situation among greatest world economies – trade wars between the USA and China in 2018, USA-EU, Russia-EU – which definitely affected economic activities and offer/demand on the global commodity market. On top of this, we should add certain tensions that were occurring in the oil-producing countries (like Venezuela), as well as the conflicts that are still going on in Syria. Energy product price trends responded to the above mentioned, which is notable in the drop in futures' prices for

many commodities during 2018 (the average annual Brent oil 20% price drop, for example). Only the price of wheat (Kansas and Chicago wheat) marked an over 10% growth during 2018 (<https://www.eia.gov/todayinenergy/detail.php?id=37832>). We can conclude that most prices of all important commodities follow the decelerating and accelerating cycles of the world's economic activity.

*Figure 4: Commodity Metal Price Index movements (1993 – 2017)\*  
(<https://www.indexmundi.com/>)*



*\*Commodity Metals Price Index, 2005 = 100, includes Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead, and Uranium Price Indices*

#### 4. LITERATURE REVIEW

The literature mainly represents the empirical research dimension of connection between the global commodity price trends and economic growth (GDP, GDP per capita) of developed and developing countries. Recently, there are more researches which refer to the connection between the commodity price and other macroeconomic and financial indicators, such as interest rate, inflation and currency exchange rates (Deaton and Miller, 1995; Deaton, 1999; Kose, 2002; Collier and Goderis, 2012; Radditz, 2007; Bruckner and Ciccone, 2010; Groen and Pesenti, 2011; Makin, 2013; Hegerty, 2016; Zhang et al. 2016; Harvey et al., 2017). We were not able to find single research on the connection and effects of global commodity market on economic growth of Serbia and its neighboring countries. We will present below some of the research results of metal (mainly copper) price effects, energy products (oil), and agricultural products on macroeconomic factors of economies that are on a different economic development level. The overview of the chosen research results is presented chronologically. Tan (1987) analyzed the structure of the offer and demand and formed an econometric model of developed western countries' copper market, taking into account macro and microeconomic factors. The most significant macroeconomic determinants were related to countries that are the biggest producers and consumers of copper, and they are GDP, industrial production, primary and secondary copper production, export and import of metal ore and refined copper, copper consumption and supplies. Labys and Maizels (1993) questioned the influence of the price change of agricultural products, mineral resources, and energy products on basic macroeconomic determinants of the chosen developed countries (GDP, industrial production, currency exchange rate, employment, and payment balance) for the period 1957-1986. They concluded that fluctuation of the said commodities had more than expected effect on economic stability and performances of the developed economies. Groen and Pesenti (2011) researched the connection of commodity market price trends, currency exchange rate, and economic development level. The authors tried to anticipate the foreign currency rate and economic growth rate in the chosen economies with the application of factor-autoregressive models, concluding that, depending on the economic development level, monetary policy has a decisive

role. Arezki and Gulafson (2011) questioned the influence of the commodity price fluctuation on GDP, based on a panel of 158 economies in the period 1970-2007. Taking into account levels of countries' economic development, the participation of natural resource annuities in GDP (NRGDP), and development level of political and economic establishment, the gained results on commodity price volatility effects showed statistically significant influence and growth in the countries with higher democracy level. Collier and Goderis (2012) investigated the effect of the global commodity price on GDP per capita in the 1968-2008 periods. When vector auto-regression analyses (VAR) applied, they confirmed short-term positive effects of market commodity price increase on GDP per capita, while long-term effects depended on the type of commodity and development and direction of the domestic economy. Makin (2013) analyzed the influence of commodity price fluctuations on export performances and the macroeconomy of the largest exporters in the Asian region – Australia and New Zealand. He focused on currency value, promoted the expression "commodity currency" and identified a long-term commodity price volatility influence on achieved GDP and trade balance of these export-oriented countries. Issler et al. (2014) attributed to understanding the future metal price movements, underlining the synchronicity of metal price movements with industrial cycles and production. They emphasized the period of economic crises in 2008 and the period of economic activity acceleration in the world, in China before all. Klotz et al. (2014) analyzed the influence of the Chinese economy on commodity price dynamic on the global market. Researching 1998-2012 periods with the application of vector auto-regression (VAR) and Granger causality test, statistical results showed that the Chinese economic boom had the largest effect on prices of industrial metals and energy products. Moreira analyzed the influence of commodity price change on the Brazilian macroeconomic variables in the period from 2005 to 2013. Applying several econometric methods, he concluded that commodity price volatility affected, with statistical significance, the level of GDP, inflation and currency value. Ratti and Vespignani (2015) researched the effect of commodity price volatility on the liquidity of the BRIC and G3 countries. They identified high co-integrity liquidity M2 of BRIC countries with energy product prices and metal price movements influence. The liquidity of the BRIC and G3 countries were highly co-integrated with global commodity prices and global GDP. The same authors (2016) analyzed the influence of the oil price on the global macroeconomic determinants of world's economy. The result was oil price highly co-integrated with industrial production and interest rates on the global level. They have concluded that oil price movements have the greatest effect on the macroeconomic performances of the USA, China, and European countries, that are, at the same time, the biggest driving force of world's economy. Hegerty (2016) investigated the influence of the chosen commodity price volatility and spill-over effects on macroeconomic performances of 9 developing countries. With the application of the GARCH model, he analyzed spill-over effects between commodity prices, GDP, inflation, exchange rate, and interest rate. He concluded that the Chile economy is highly dependent on copper price, Indonesia on the price of oil and tin (pewter), while global oil price has no significant effect on the Russian economy. Medina and Soto (2016) analyzed the commodity shock price effects on export-oriented economies. They developed a DSGE model for the business cycle in Chile, the greatest global exporter of copper. Zhang et al. (2016) researched the commodity price movement effect on currency exchange rates in export-oriented countries – Canada, Australia, Norway, and Chile, taking into account dominant export commodities – copper, WTI oil, Brent oil, and gold. Bright (2016) analyzed the influence of copper market prices on the macroeconomic performances of Zambia, a great producer of copper ore. On the basis of the ARDL model applied, he concluded that interest rate, inflation, oil price, and agricultural production have a long-term influence on sustainable economic growth, while the copper price has a short-term influence. Brueckner and Nguyen (2016) questioned the effect of commodity market prices on the Vietnamese macroeconomic variables (GDP per capita, trade, i.e. terms of

trade). The results revealed a relatively small positive Vietnamese GDP per capita and terms of trade dependence on the global market commodity price movements. Harvey et al. (2017) tested the Prebisch-Singer hypothesis of long-term primary commodity price growth effect on economic activity in developed economies from 1650 to 2014. The application of multiple econometric methods separated several historical economic key cycles and stressed the influence of commodity price movement on the economic activity of export-oriented economies in the world.

## 5. RESEARCH METHODOLOGY

As determinants of the Serbian economic growth, we have taken into account annual GDP per capita values and goods and service trade balance values. Historical data for achieved annual values for 1998-2017 were taken from reports and analyses published on official sites of National Bank of Serbia, Statistical Office of the Republic of Serbia, web portals Trading Economics and Macrotrends. Information of metal spot price movement in the named period was taken from the LME official site. Historical spot prices of Brent oil and Russian natural gas were taken from the site of US Energy Information Administration (EIA) and web portals Macrotrends, Trading Economics, and Indexmundi. Spot prices of Hard Red Winter wheat were taken from the Indexmundi web portal. The connection between movements of the commodity market prices and economic growth will be presented by correlation analyses and multilinear regression, with forming of two multilinear regression equations or type models:

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

Where:

Y – Dependent variable (macroeconomic determinants – annual GDP per capita and annual values of commodity and service trade balance – TBSRB)

$\alpha_0$  – Regression model constant

$\beta_{1,2,n}$  – Regression model coefficient

$X_{1,2,n}$  – Independent model variables (annual average commodity spot prices)

$\varepsilon$  – Model residuals (standard error)

The overview of dependent and independent regression model variables is given in Table 2.

	Variables	Annual data
Dependent variables (Y)		Unit
Gross Domestic Product per capita (GDPpc)		USD
Trade balance of goods and services (TBSRB)		mil. USD
Independent variables (x)		
Copper Spot price (HGSpot)		USD/t
Aluminium Spot price (ALSpot)		USD/t
Iron ore Spot price (IronSpot)		USD/t
Oil Spot price (Brent)(OilBrent)		USD/bbl
Russian natural gas Spot price (RusGas)		USD/MMBtu*
Wheat Spot price (WheatSpot)**		USD/metric ton
*British thermal units		
**Hard Red Winter		

Table 2: Variables of research

Basic presumption when forming a multilinear regression model is a normal distribution of the model's residual variables.

In the course of normality testing, we will apply the Jarque-Bera test, where the values necessary to prove the hypothesis  $H_0$  (residuals have a normal distribution) are  $JB < \chi^2$  and  $\alpha > 0,05$ . In case of normal distribution of residuals' absence, logarithm transformation for variance stability will be applied. For the construction of regression models, we will use SPSS 20 and XLStata Premium software. To grade the quality of gained regression models, that is, an evaluation of reliability and impartiality, we need to run a few econometric tests. The first test refers to the questioning of the multicollinearity absence. This test uses two determinants: Variance inflation factor (VIF) and Tolerance factor (TOL). VIF gives us an estimate on how much will the regression coefficient variance enlarge due to a linear dependence on other independent variables. There are divided opinions on the VIF, i.e. TOL limits when testing a model. As a rule, the multicollinearity problem doesn't exist when the values of  $VIF < 5$ , that is  $10 (R^2 < 0,8 (0,9))$ , while the values of  $TOL < 0,2 (0,1)$ . Variables whose VIF values are over 10 shouldn't be in a model, while there are opinions that  $VIF > 2,5$  and  $TOL > 0,4$  point to a multicollinearity problem. The second test refers to residual model normal distribution, which will be tested with Shapiro-Wilk and Jarque-Bera test ( $H_0$  = residuals have a normal distribution). Third standard model presumption refers to accidental error homoskedasticity/heteroskedasticity control. It is essential that accidental errors show the same level of distribution around their middle value. When we have accidental error variances significantly different from one another, it is a case of heteroskedasticity. Residual testing will be checked with Breusch-Pagan and White test. Autocorrelation of residuals is a common occurrence in economic time series case, which presents a fourth test, or a standard model presumption. We will apply a Durbin-Watson test for discovering autocorrelation. Values  $DW < 2$  and  $DW > 2$ , with consulting the table values  $d_l$  and  $d_u$ , can point to an appearance of expressed autocorrelation of residuals. In that case, some of the models for removing autocorrelation of residual will be applied (for example, Cochrane-Orcutt).

## 6. RESULTS AND DISCUSSION

The results of Pearson's correlation coefficient show a strong statistical connection between commodity market price and macroeconomic determinants of the Serbian economy growth, apart from aluminum price where there is a weak connection to chosen macroeconomic determinants. The greatest level of correlation with the Serbian GDP per capita variable is achieved by copper price (0,868), Brent Oil (0,788), iron ore (0,698) and Russian gas (0,701). Serbian commodity and service trade balance variable is highly positively correlated to iron ore price variable (0,738), while price variables of oil and wheat are highly correlated but with the opposite sign (-0,678). The correlation matrix is given in Table 3.

	HGSpot	ALSpot	Iron Spot	OilBrent	Rus Gas	Wheat Spot	GDPpc	TBSRB
HGSpot	1	0,611	0,904	0,637	0,826	0,777	0,868	0,520
ALSpot	0,611	1	0,435	0,542	0,674	0,686	0,451	-0,345
IronSpot	0,904	0,435	1	0,457	0,743	0,734	0,698	0,738
OilBrent	0,637	0,542	0,457	1	0,535	0,584	0,788	-0,678
RusGas	0,826	0,674	0,743	0,535	1	0,916	0,701	-0,018
WheatSpot	0,777	0,686	0,734	0,584	0,916	1	0,651	-0,678
GDPpc	0,868	0,451	0,698	0,788	0,701	0,651	1	-0,703
TBSRB	0,520	-0,345	0,738	-0,678	-0,018	-0,678	-0,703	1

Table 3: Correlation matrix

Table 4. presents the results of the Jarque-Bera normal distribution test of model variables residuals. We notice that all residual values are normally distributed and within critical limit values, on the 0,05 significance level. Obtained results are the base for multilinear regression model construction.

Jarque-Bera test						
JB (Critical value - $\chi^2$ )	5,991465		<i>H0- Residuals have a normal distribution</i>			
DF	2		<i>Ha – Residuals don't have a normal distribution</i>			
p-value ( $\alpha$ )	>0,05					
Variables	DF	JB	p -value			
GDPpc	2	2,22643	0,328501	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
TBSRB	2	1,057531	0,589332	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
HGSpot	2	1,978232	0,371905	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
ALSpot	2	2,133446	0,344134	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
IronSpot	2	2,037289	0,361084	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
OilBrent	2	2,39932	0,301297	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
RusGas	2	1,480275	0,477048	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
WheatSpot	2	2,605396	0,271798	$\alpha > 0,05$	$JB < \chi^2$	<i>H0</i>
<b>RESIDUALS HAVE A NORMAL DISTRIBUTION</b>						

Table 4: Results of the Jarque-Bera test of normality

The results of the first GDP per capita regression model, with standard reliability presumptions and model impartiality check-up, were given in Table 5. The coefficient of determination adj.  $R^2$  is high and stating that the model explains 86% of dependent changeable GDP per capita variance. The results of econometric quality model tests are within limits on the 0,05 level. Statistically significant regression coefficients on the 0,05 level are the price of copper (HGSpot), aluminum price (ALSpot), and oil price (OilBrent).

Model 1 – GDPpc SERBIA 1998-2017 (0,05)												
	R <sup>2</sup>	Adj.R <sup>2</sup>	F	Coeff.	P-value	VIF	TOL	SW*	JB*	BP*	WH*	DW*
	0,90	<b>0,863</b>	0,00					0,328	0,976	0,976	0,876	1,756
Intercept				<b>4127,54</b>	<b>0,0001</b>							
HGSpot				<b>0,408</b>	<b>0,004</b>	<b>13,035</b>	<b>0,077</b>					
ALSpot				<b>-0,784</b>	<b>0,033</b>	<b>2,413</b>	<b>0,414</b>					
IronSpot				-8,143	0,123	8,366	0,120					
OilBrent				<b>7,66</b>	<b>0,010</b>	<b>2,254</b>	<b>0,444</b>					
RusGas				43,24	0,595	8,877	0,113					
WheatSpot				-0,481	0,881	8,364	0,120					
*Tests: SW-Shapiro-Wilk; JB-Jarque-Bera; BP-Breusch-Pagan; WH-White; DW-Durbin-Watson.												
Model 1: $Y(\text{GDPpc}) = 4127,54 + 0,408(\text{HGSpot}) - 0,784(\text{ALSpot}) + 7,66(\text{OilBrent})$												

Table 5: Model 1 – GDPpc Serbia

The results of the second regression model – trade balance of Serbian commodity and service (TBSRB), with standard reliability presumptions and model impartiality check-up, are given in Table 6. The coefficient of determination adj.  $R^2$  explains 90% of dependent changeable variances for TBSRB. The results of econometric quality model tests are satisfying, on the 0,05 level. Statistically significant regression coefficient on 0,05 level are iron ore price (IronSpot), oil price (OilBrent), and price of wheat (WheatSpot). Due to the high value of multicollinearity factor variance determinants (VIF), wheat price variable (WheatSpot) cannot be a part of the regression model.

Model 2 – TBSRB 2007-2017 (0,05)												
	R <sup>2</sup>	Adj.R <sup>2</sup>	F	Coeff.	P-value	VIF	TOL	SW*	JB*	BP*	WH*	DW*
	0,936	<b>0,904</b>	0,0005					0,480	0,589	0,100	0,997	2,360
<b>Intercept</b>				<b>5606,46</b>	<b>0,009</b>							
HGSpot						16,696	0,060					
ALSpot						18,148	0,055					
<b>IronSpot</b>				<b>69,214</b>	<b>0,0005</b>	<b>8,717</b>	<b>0,115</b>					
<b>OilBrent</b>				<b>-20,431</b>	<b>0,048</b>	<b>2,821</b>	<b>0,354</b>					
RusGas						25,707	0,039					
WheatSpot				-21,404	0,06	43,723	0,023					
*Tests: SW-Shapiro-Wilk; JB-Jarque-Bera; BP-Breusch-Pagan; WH-White; DW-Durbin-Watson.												
Model 2: $Y(TBSRB) = 5606,46 + 69,214(IronSpot) - 20,431(OilBrent)$												

Table 6: Model 2 – TBSRB Serbia

As seen from the regression Model 2, with 5% error, we claim that trade balance of Serbian commodity and service will increase by 69,21 million US dollars, in case that an average annual price of iron ore goes up by 1 US dollar (there will be a deficiency decrease), while in the case of an average oil price increase (oil type Brent) by 1 US dollar, the trade balance of commodity and service will decrease by 20,43 million US dollars, and vice-versa (there will be a deficiency increase). If we consider the fact that exports side of Serbia have been dominated by iron and steel for years, and the imports side by oil and Russian natural gas, the obtained results have their theoretical and practical foundation. Still, according to the author, formerly stated results have several statistical limitations: first, we have taken the period from 2007 to 2017 for the trade balance analyses, only because it was not possible to acquire older data and left us with only 11 observations, which is a short period, and second, Serbia has lately been recording high scores on the corn export side (the highest export values among agricultural products) so it would be interesting to see if there are statistical connections and influence of global corn price on Serbian macroeconomic variables. However, we shall leave that for some of the future researches.

## 7. CONCLUSION

The obtained results on the connection and global commodity price influence on the economic growth of Serbia are in accordance with the existing research results for developing countries given by foreign authors. Researching the 20 years period, we concluded that price fluctuations of certain commodities have a long-term influence on the economic activity in Serbia. Namely, the copper price coefficient of correlation with achieved GDP per capita is very high (0,868), with a statistically significant presence of regression models with a positive sign. Aluminum price coefficients of correlation and regression are very low, with a negative sign, so the price of aluminum cannot be seen as a possible indicator of long-term economic activity in Serbia, although it is a statistically significant variance which is included in the models. Prices of iron are identified as highly correlated with all regression dependent variables (GDP per capita and TBSRB) but also as a statistically significant variable which is present only in TBSRB regression model. This finding has its solid foundation because Serbian commodity exports value has been rising, based on production growth and export of iron and steel. On the other hand, country's investments in the construction sector, being one of the biggest consumers of this metal, and providing this type of services abroad, bring us to a conclusion that iron and steel price movements can be indicators of future long-term export activities in our country and, partially, of GDP growth. When it comes to energy products, the price of crude Brent oil has a high correlation with dependent variables and is the only variable present in two regression model at the 0,05 level of significance. Thus, we conclude that price movements of Brent oil

present a significant indicator of economic activities in Serbia, considering that high trade deficiency is based on high import values of this particular energy product. Prices of Russian gas have high correlation coefficients with dependent variables but with no statistical significance, meaning that this variable is not included in regression models. Global wheat prices significantly follow the movements of dependent variables but due to statistical insignificance and high coefficient of variance factor VIF in the TBSRB model, this variable is not included in the model. Taking into account estimated 3,5% growth of Serbia real GDP for 2019 (a drop for 0,9%, compared to 2018), as well as slowing down of economic activities of two greatest economies, the USA and China, a downfall of demand can be expected, along with a decrease of commodity prices on global markets, which agrees with the estimates of a future growth in our country. Observing our results, we can identify the key indicators of Serbia's economic growth – global copper price movements and price of Brent oil. We shouldn't disregard the fact that global prices of copper and oil, like many other commodities, are formed on futures markets which are unpredictable, where the prices depend on many exogenous factors (mostly political) and unexpected events. In a nutshell, prices depend on the mood and expectations of the biggest investors and traders in the world. Serbia is an open economy with growing economic and foreign trade cooperation, with EU countries and China above all. Each deceleration of the EU region countries' economic growth directly affects economic activities in our country, which is the current reality. Compensating exports to eastern countries, China and Russia in the first place, have massive potential but limited domestic capacity.

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## INTERNATIONALIZATION OF MARKETING ACTIVITIES IN GLOBAL BUSINESS ENVIRONMENT

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### **ABSTRACT**

*The characteristics of contemporary marketing environment are rapid changes and business discontinuity that requires reassessing the company's competitiveness. The internationalization of marketing is a rational response to the current changes in the global environment and the increasing interdependence, connection and availability of certain segments in the world market. The orientation towards global markets in those conditions becomes inevitable, since it is about creating a new strategic horizon that enables not only an adequate economies of scale, but also the promotion of key success factors and knowledge economies in an altered competitive environment.*

**Keywords:** *marketing management, globalization, international business, foreign markets*

### **1. INTRODUCTION**

A modern business environment is characterized by increasing changes and a discontinuity in business activities that may require a re-examination of the company's competence. There are the following challenges of marketing management at the end of the 20<sup>th</sup> century: the acceleration of the rate of change (technological, economic, political, etc.), increase of the level of competition, intensification of the globalization of operations, radical changes in the field of technology (especially ICT), flexibility, quality innovation as an imperative for managers, a more complex managerial environment and increased demands of stakeholders. A response to the challenges of modern business requires from managers to be transformational leaders, to have the capability to create and implement strategies that will bring competitive advantages to the company both locally and globally, as strengthening interdependence in the world economy has given a strong impetus to the internationalization and globalization of overall business activities and defined new frameworks for complex enterprise integration into international flows. The classical exporting by national companies as the dominant form of international engagement during the 1950s has been replaced by the expansion of cooperative forms of international business, with a pronounced growth of foreign direct investment by US companies in the sixties. The years of the so-called "American Challenge" have been substituted by the 1970s period, which was marked by Japanese companies. The expansion of multinational companies has defined the transformation of the nature of international business in the direction of internationalization, and an active engagement in global market flows is becoming one of the key preconditions for a successful competitive profiling of those companies that pretend to support a more favorable market positioning. The dynamics of the world market relativizes the advantages of the acquired market positions established during the eighties, when the international competitive environment changed significantly with the emergence of

multinational companies from the newly industrialized countries of Southeast Asia and partly, Latin America. In such conditions, processes of interconnectivity are intensified and they develop tendencies of cooperation with those categories that are direct competitors. At the same time, the transformation process of most multinational companies, especially those with extensive activities in the country of origin and a large number of branches abroad, takes place in transnational companies, whose activities and responsibilities are more evenly distributed, but which gradually lose their national identity. In this way, the key characteristics of globalization in the nineties and the changes in the global business environment, which further emphasize the significance of international business and the necessity of international business orientation, become prominent (Rakita, 2009, pp. 111-113).

## **2. THE DEVELOPMENTAL FORMS OF BUSINESS INTERNATIONALIZATION**

The internationalization of business is a continuous process, as a given company gradually increases the level of its involvement and degree of engagement in international business flows. Hence, the process of developing international business activity can be structured in the following evolutionary phases (Jović, 1997, p. 50-55):

- The foreign trade stage;
- The export marketing orientation phase;
- The stage of multinational orientation;
- The global orientation stage.

The international orientation of the company usually begins with a foreign trade exchange aimed at achieving profit by direct sales on the foreign market. It involves the initial stage of the internationalization of business in which the priority is still given to the domestic market, and hence the limited ability of the company to adapt to the demands of the foreign market. The surplus of the domestic business is mostly sold on foreign markets, and adapting to international business is reduced to a specific adjustment of the existing product to foreign markets, and not the adaptability of enterprises to international business. The focus of business activities in the foreign trade orientation is mainly directed towards the concrete foreign market and the adjustment of the existing product to the requirements of that market, without some major ambitions to form a long-term strategy of operational internationalization. Unlike the initial and conventional stage of foreign trade orientation, the stage of export marketing orientation shifts the focus of the business activity on the company's adaptability to carry out business operations on the foreign market. This involves establishing an export-oriented production and building its own marketing infrastructure, which is also a sort of introduction into multinational and global orientation in the international business dealings of the company.

*Figure following on the next page*

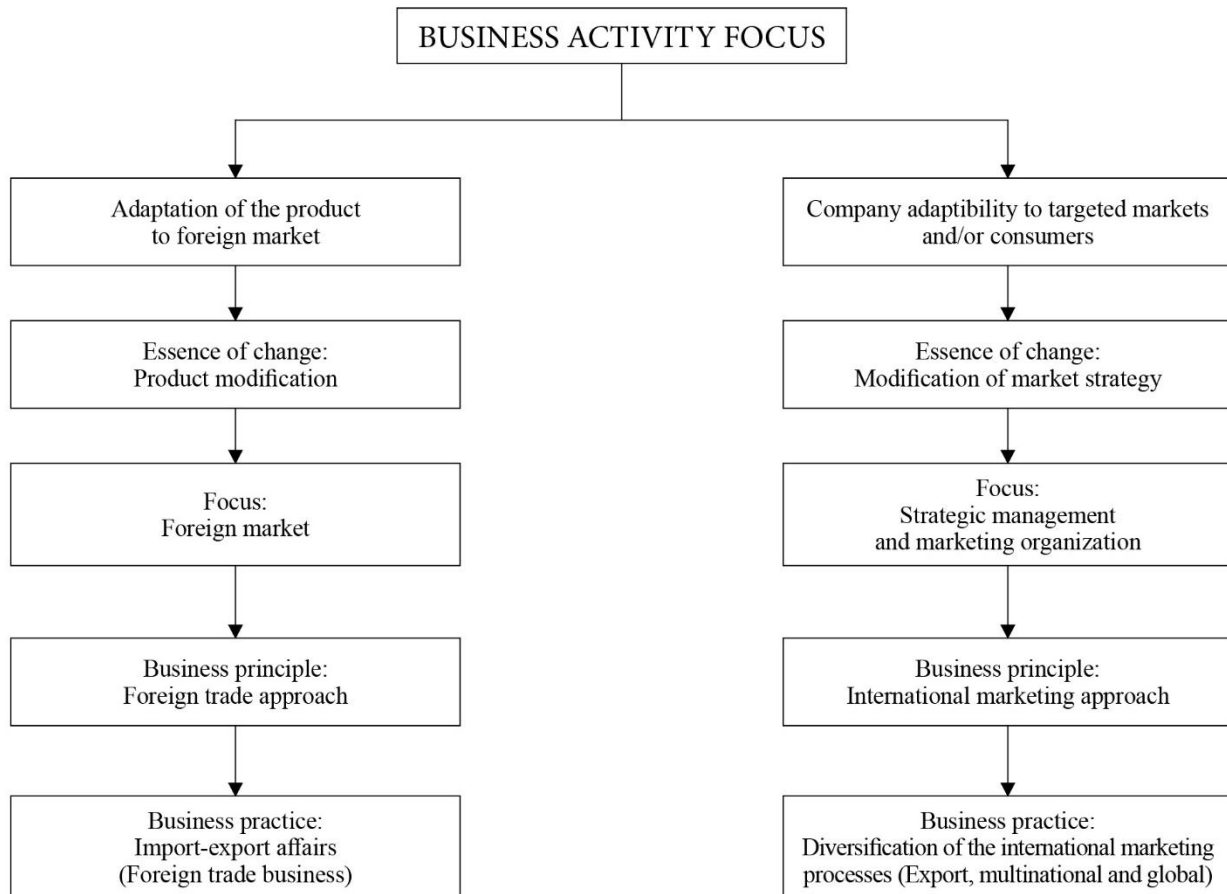


Figure 1: The adaptability of enterprises to international business (Jović, 1997, p. 51).

Successful positioning on numerous national markets at the stage of multinational orientation is directly related to foreign direct investments, as well as the process of transferring some parts of the reproductive process from the national economic space to the markets of other countries. It tends to be profiled in relation to the strongest local competitive, primarily through quality management, for which segmentation and differentiated processing of foreign markets is necessary. By organizing international business activity within special international business units or branch offices, the company has all the international characteristics, losing the attributes of a national company. According to Keegan, the stage of global orientation is a logical outcome of a kind of determinism in the evolution of enterprises from the national through international and multinational to global (Keegan, 1989, p. 7). Business globalization is a rational business response to the ever-increasing interdependence, connectivity and availability of certain parts of the world market. It is about the process of expanding the business and development horizons, starting from the supranational, that is, global dimensions, as the only perspective ones. Hence, the global company views the entire world as one market and seeks to meet the needs of the stakeholders by balancing global experiences and assets (Todorović and Milisavljević, 1995, p. 184). Strategic goals are focused on creating a global competitive advantage by integrating all the company activities into an interconnected global system. This requires the consensual exploitation of cost advantages through standardized global production, which assumes that individual branches cannot operate independently at the national level, but are committed to a division of labor and specialization around the world. The development of technology and the interconnectedness of branches and activities on this basis have significantly enabled this approach.

	Sales approach	Access by building an entry strategy
Time horizon	Short-term	Long-term
Target Markets	Without system selection	Selection based on market analysis and sales analysis
Dominant goal	Current sale	Constructing a constant market position
Engaging resources	Only as needed for a particular sale	All that is imposed by the need to achieve a permanent position
Entry modality	Without a system selection	A systematic selection of the most suitable modality
Development of a new product	Exclusively for the domestic market	For domestic and foreign markets
Product adaptation	Only the necessary changes of the domestic product in accordance with the legal conditions and technical standards	Adjustment of the product from the domestic market according to preferences of the foreign customers, income and conditions of use
Distribution channels	Without attempts to establish control	Efforts to maintain control in order to support the achievement of market goals
Prices	Determined by total costs in the country with certain adjustments in specific situations	Determined by demand, competition, goals, and other elements of marketing, and, of course, costs
Promotion	Mostly restricted to personal sales	Promotional promotion activities to achieve the company's market goal

*Figure 2: Distinctive advantages of a strategic vs. sales approach to the foreign market (Root, 1997, p. 54).*

The internationalization and globalization of production and exchange are key processes that have led to the need of redefining access to the foreign market. Consequently, traditional foreign trade operations, as an expression of the defensive variant of achieving the function of an international distinctive advantage, can be seen in Figure 2. This involves essentially different strategic and management profiling of international business activities in line with current changes in the international trade environment. Accepting a new international business engagement assumes the choice of an appropriate strategic competitive framework. The ability of management to recognize the requirements of the target markets and respond flexibly to competitors' actions will impact the success of the entire international business mission of the company. Hence, the selection of the appropriate strategy in international business is undoubtedly one of the critical factors for the success of the company. Accordingly, Porter defines four basic frameworks of an international business strategy that can be seen from Figure 3.

*Figure following on the next page*

**Geographical frame**

	<b>Global strategy</b>	<b>Country oriented strategy</b>
many segments	Global leadership in expenses or differentiation	Protected markets
little segments	Global segmentation	National

*Figure 3: Alternative strategies in international business (Porter, 1986, p. 6).*

The strategy of global leadership in cost or differentiation is aimed at competition around the world with a full product line using the advantage of low overall cost or product differentiation. Global segmentation focuses on certain segments by following the competitive advantages of a global strategy. Used often among transnational enterprises from small countries, this strategy is also a sort of link between domestic and global strategies. The strategy of protected markets is closely related to foreign direct investment, since it is directed towards those countries whose markets are protected by state protectionist barriers. By defining a national strategy, the enterprise focuses on those segments of the branches that are most influenced by local differences between individual countries. The changed profile of the international trade environment clearly indicates that there is no single approach to competition, or one type of strategy that leads to the successful realization of set goals in international business. Hence, any more serious engagement of companies in international business assumes the ability to fine-tune and coordinate particular strategies used in different foreign markets. In any case, the competitive advantage is on the side of those companies that better use their assets and competence in international business, and which successfully extend the life cycle of the existing ones or offer differentiated new products, as well as expanding the risk of doing business through new business or conquering new markets, at the same time successfully overcoming the barriers to entry onto attractive markets (Agarwal and Ramaswami, 1994, p. 199).

### **3. THE IMPACT OF INTERNATIONALIZATION ON THE ORGANIZATION OF MARKETING**

The choice of country for entry conditions the concept of an appropriate marketing organization. The goal is to respond to the different needs of international marketing, using experience and knowledge from the local market where and when necessary. The company enters international marketing by simply delivering its products. As the sales on the foreign market increase, the company organizes the export sector with a sales manager and several assistants. If sales continue to increase, the export sector can then be expanded to include various marketing services. When the company enters into joint ventures or direct investments, the export sector will no longer be adequate. Many companies are involved in several international markets and business ventures. The company can export to one country, license it to another, have a joint venture in the third and its own branch in the fourth. Sooner or later, it will form an international division to carry out all of its international activities. International divisions are organized in different ways. The board of directors of the parent company consists of specialists in the field of marketing, production, research, finance, planning and personnel.

They plan and provide services for different business units, which can be organized in one of three ways (Keegan, 1989, p. 98). They can be geographical organizations, with country managers who are responsible for sellers, sales outlets, distributors and licensees in their respective countries or business units, or they can be global product groups, each responsible for the sale of different product groups worldwide. Finally, business units can be international affiliates, each responsible for their own sales and profits. Several companies have gone past the stage of international division and have become truly global organizations. They stopped thinking about themselves as national salesmen who were selling ubiquitously and began to think of themselves as a global seller. The top corporate management and management board plan the production, equipment, marketing policies, financial flows and logistics systems worldwide. Managers are trained for business worldwide, not just domestic or international markets. The company recruits management from many countries, buys parts and materials with the lowest price and invests where the highest expected yields are expected to be. Today, companies that want to be competitive must be globally oriented with an aggressive presence on foreign markets. There is an increasingly noticeable trend of change from companies that treat their international business as a secondary business to companies that the whole world regards as a single market without borders. The internationalization of business operations affirms a combination of internal and external growth through the creation of strategic alliances and coalitions. In trying to eliminate constraints on internal and external growth, companies create alliances with the expectations that by combining asymmetric advantages of both, performance can be maximized at the same time. Most often it is about cooperation and certain organizational and business arrangements in the domain of licensing, franchising, marketing, research and development, as well as consortium appearances on certain markets (Todorović and Đuričin, 2000, p. 401).

#### 4. THE DETERMINANTS OF STRATEGIC ADVANTAGES IN GLOBALIZATION CONDITIONS

Competitive advantages, when creating the strategy of globalization, are realized both on the basis of more efficient use of assets and position, as well as in the domain of the flexibility strategy. A more efficient use of assets and positions can be achieved through the following: a) an economy of scale along with the internationalization of operations, which helps to capitalize on investments in some value chain activities, b) synergy in coordination and integration in the sense than an economy of scale can be achieved due to presence on several national markets and via the unification of procurement, as well as the concentration of some marketing activities or a better location of production and logistics capacities, thus gaining greater negotiating power in relation to suppliers and advantages over local competition, and c) a transfer of ideas, experiences and know-how acquired on one market or business area to other national markets (Todorović, 1998, p. 168).



Figure 4: Realization of Global Synergies (Douglas, 1995, p. 323).

The competitive advantages of a transnational company based on strategic flexibility can occur from the following (Douglas, 1995, p. 328-329):

- the possibility to divert production from one country to another in order to use favorable circumstances in the movement of exchange rates, wages, taxes, etc., or modify the organization system of production in terms of introducing a modular production that will ensure that the product is adapted to the needs of local markets by combining components;
- dispersion of supply sources and multi-stakeholder components, which allows “hedging” in relation to currency fluctuations, amortizing political instability and the restrictions imposed by individual actions, etc.,
- the ability to maintain competitiveness in price-sensitive markets and, at the same time, profit from protected or inexpensive markets through a price policy or through price transfers;
- the ability to “convert cash and other transferable resources from a recession into a rising market, or to compensate for planned losses within one business activity, and profits on the other.”

The internationalization of business increases the geographical and multicultural dispersion of its business, and develops correlations with the environment. It is also necessary to adapt the management style and the macro organizational structure to newly-formed conditions. Hence, it is important that the process of internationalization is carried out in such a way that it enables the company to continuously capitalize on acquired experience, step by step, as well as to preserve control or minimize the risk of doing business in foreign markets. Companies that have achieved leading positions at the international level use strategies that differ in every way. However, while every successful company will use its own specific strategy, the method which underlies everything, the character and the path of all successful companies is fundamentally the same. Furthermore, companies achieve a competitive advantage through innovation. They approach innovation in its widest sense, including both new technologies and new ways of doing things. They perceive a new basis for competition or find better means to compete with each other in the old ways. Innovation can be manifested in a new product design, a new production process, a new marketing approach, or a new way of training. Most of the innovations are terrestrial and daily, and much more depends on the accumulation of small-scale insights and improvements than on private, fundamental technological breakthroughs. Innovation uses ideas that are not even new - ideas that were in circulation but were never strictly followed. Also, it always includes investment in skills and knowledge, as well as in physical property and the reputation of brands. Some innovations create a competitive advantage by perceiving an entirely new market opportunity, or by serving a market segment that others have neglected. When competitors react slowly, such innovations gain a competitive advantage. For example, in industries such as the automotive industry and the home electronics industry, Japanese companies have gained an initial advantage by putting emphasis on smaller, more compact low capacity models that were despised by foreign competitors and considered to be less profitable, less important and less attractive. Innovations that gain a competitive advantage on international markets must anticipate both domestic and foreign needs. For example, as the international concern for product safety grew, the Swedish company Volvo succeeded by anticipating a market opportunity in this area. On the other hand, innovations that respond to concerns or circumstances specific to the domestic market can in fact postpone and slow down international competitive success. Information plays a major role in the process of innovation and improvement - information which is either unavailable to competitors or which they do not even search for. Information sometimes arises from a simple investment in the development of market research; it is the result of effort, openness and searching in the right place, untouched by the blinding assumptions of conventional wisdom.

Once a company achieves a competitive advantage through innovation, it can only be sustained through continuous improvement and development. Almost every advantage can be creatively reproduced, so we get a product with the same or an insignificantly different performance. Korean companies have already achieved the ability of their Japanese competitors to massively produce color TVs and video recorders; Brazilian companies have by now combined technology and design that can be compared to those of Italian competitors in the production of informal leather footwear. Competitors will inevitably get the better of every company that ceases to improve and innovate.

## 5. CONCLUSION

The internationalization of operations represents a rational response to the current changes in the global environment and the increasing interdependence, connection and availability of certain segments of the world market. The orientation towards international and global markets in such conditions becomes inevitable, since it involves creating a new strategic business horizon that enables not only an adequate economy of scale, but also the promotion of key success factors and knowledge economies in an altered competitive environment. New information and knowledge has become the most important feature of international competition and a new basis for the international allocation of material, financial and human resources. One of the basic prerequisites for success on the global market is the continuous improvement of business quality. This process is accompanied by frequent delays and withdrawals, in order to make a significant shift in the coming period. It is extremely important that the company's strategy stems from goals and the tactics are derived from the strategy, not vice versa. To be successful, the company must be a unique flexible business system that is focused on understanding the needs of target markets and coordinating overall activities to meet the needs that are subject to constant change. The success of the company is increasingly conditioned by the quality of the established connections with the partners, and the less autonomous performance in the foreign market. Hence, strategic alliances, as a specific form of international business connectivity combining the strengths and interests of different companies maximize asymmetric advantages, representing a propulsive model for overcoming the barriers for accessing the international market. Strengthening the role of internationally-oriented companies and the globalization of business leads to the greater dependence of international market flows on a company's business moves rather than on foreign trade policies of states.

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## EMPIRICAL BOND BETWEEN THE HAPPINES INDEX, GDP AND GREEN GDP

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### ABSTRACT

*Traditionally, the leading indicator of economic progress is GDP, with all of its known shortcomings. As a variety of alternatives, more and more indicators of economic growth and development are gaining ground with measures that are corrected for social and environmental costs. One of these alternatives is the so-called Green GDP as a measure of economic progress with pronounced ecological components. Green GDP is an alternative way for quantification and measurement of monetary impact of the social and environmental damage caused by a country's economic growth. Through this paper, we want to relate the Happiness index with the standard GDP measure and the alternative measure, Green GDP. Namely, the Happiness index is used as a measure that generally shows the satisfaction of the inhabitants of a country in the conditions they live in for it is consisted of six key variables in a country's economy, namely income, expected life, social security, freedom, trust, and generosity. The aim of this paper is to find out whether there is a significant bond between the Happiness index and economic growth indicators or whether there is a possible cyclical correlation between these variables. For this purpose, we used standard statistical tools and spectral analysis technique. Thus, we came to the conclusion that the environmental component represents an important part of the satisfaction and happiness of the people, i.e., the awareness about the burning ecological problems in the world is becoming more and more important for the economy, both on the national and personal level.*

**Keywords:** *Happiness index, GDP, Green GDP, spectral analysis, cross-country analysis*

### 1. AN INTRODUCTION TO THE RESEARCH TOPIC

Economic progress is directly linked to an improved quality of life of an individual and society - a better standard of living permits better nutrition, better health care and nursing, better education - in other words, economic progress provides an enhanced way of living in accordance with the needs and desires of the whole society. However, in recent studies, the subjective feeling of satisfaction is not always and without exception conditioned by economic well-being or financial wealth. Moreover, studies dealing with a subjective sense of satisfaction, in many cases suggest that the inhabitants of less developed and less wealthy countries expressed greater subjective satisfaction than the inhabitants of some richer countries. Thus, this subjective sense of satisfaction came as a surprise to the experts and the public as a phenomenon that has not been given any particular importance at least on any institution level. The subjective level of satisfaction is called the Happiness index, hence our study can be interesting from the perspective of the question – what kind of relationship exists between the Happiness index, GDP and an alternative GDP calculation?

The World Health Organization defines the quality of life as the perception of a person about their own lives in the context of the cultural and value system in which they live and because of their goals, expectations, and limitations. However, the definition of the concept of quality of life depends on the context in which that term is used. In economics, life standard, i.e. the quality of life is acknowledged as the totality of material and social conditions that allow for a particular lifestyle, while in medicine it is usually the degree of preserved functions of a patient. In psychology, the quality of life is evaluated through an individual's assessment of his/her satisfaction with the way of life, its course, conditions, perspectives and possibilities, and limitations" is an individual assessment. This definition is most commonly used and is the closest to explaining the notion of quality of life. This individual assessment of one's satisfaction is based on individual experience and expectations, aspirations and value system, and is also determined by the psycho-physical framework of an individual's characteristic.

### **1.1. The Happiness Index**

The primary objective of quality-of-life research is to identify factors that contribute to the achievement of the goals and potential of individuals and the living of the desired lifestyle, (Veenhoven, 2005). Assessment of quality of life can be subjective and objective. In this paper, we combine a subjective assessment of the quality of life in the form of a Happiness index and an objective assessment of the quality of life in the form of measurements of GDP and Green GDP. The subjective approach is more complicated in comparison to the objective approach, but recent studies have shown that this approach is also more relevant and useful "because subjective indicators are better predictors of global life estimation than objective ones" (Diener, 1999). That is, "an individual is best able to determine for himself how happy he is and how satisfied he is in his or her whole life or certain areas of life" (Lipovčan, 2011). However, there are some difficulties with this approach that relate to measurement problems, given the fact that people differ greatly as they differently attach importance to the particular areas of life. The Happiness index, as an economic term that appeared only recently, parallel with an increase in interest in the feelings of happiness and happiness of an individual, man. As anthropologist Yuval Noah Harari argues, the fact is that people in the past did not have time to deal with thinking about whether they were happy and if not why they did not, because they had more important concerns - hunger, wars, disease epidemics and more (Veenhoven, 2005). Based on the Happiness index, the United Nation (UN) prepares a publication called the World Happiness Report, or a Global Happiness Report. The research is conducted by the UN's Sustainable Development Solutions Network initiative, the Sustainable Development Solutions Network, led by John F. Helliwell, Richard Layard, and Jeffrey Sachs, along with numerous associates. The measurement is carried out using the so-called, Cantril ladder survey, based on which the respondents express their opinion or satisfaction with their own life through a score of 0 to 10, where the value of 10 represents the best possible life, and the value 0 represents the worst possible life the worst possible conditions and personal perception of the same, or satisfaction of the respondents. Questions to which the respondents answer are about their everyday life, satisfaction of the same, but also the general sense of satisfaction with life in general, not just on an everyday basis - for example, a person can be generally satisfied with life because he has fulfilled some of his personal goals, but can currently to be dissatisfied as he is going through a troubled phase in life, etc., and vice versa, a person may be generally dissatisfied, but in the current moment, due to a nice event, he may experience a sense of deep satisfaction (Diener et al, 1999). So, as we see it, happiness is possible to understand differently and interpret differently - in other words, for every concept we find various definitions, and it is not easy to find a definition that reconciles all these attitudes and which encompasses all that happiness is. The specific research domain is not easily conceived and perceivable, so current studies, like the one from the UN, are often criticized.

However, the fact is that the results of these surveys are more or less coinciding year after year, and when they change, these changes are in line with changes in the circumstances of individual countries, which show that these results are most credible.

## **1.2. Green GDP**

Green GDP is today known as a general concept that refers to a wide array of adjusted GDP measures that are corrected for social and environmental costs. In that manner, Green GDP is just an alternative way for the quantification and measurement of the monetary impact of social and environmental damage caused by a country's economic growth. The most common approach to measuring the Green GDP is to deduct the costs like natural resources depletion and pollution damage, from the standard GDP measure. There is an interesting way to explain the (conceptual) purpose of this indicator. If we consider that by adding social features/human capital and environmental features/natural capital to a standard measure of the volume of output, we are relating it to the deterioration in social or environmental capital and reducing it by the amount of capital thus consumed, some say that we could look the other way around, too. So that any improvement in social and environmental capital constitutes in itself a form of output and can, therefore, be added to standard GDP measure, (Stjepanović, Tomić and Škare, 2017). Green GDP should not be confused with various social and environmental accounting systems, as a large number of these carry issues and problems related to valuation and calculation. As Alfsen et al. (2006) explains, a Green GDP measure will also in many contexts do more to obscure problems than resolve them, however, from its inceptions, this indicator has become a significant factor in the development and implementation of different sustainable strategies in the world. In the end, we post the question: why the Green GDP and not the standard GDP indicator?

## **1.3. Standard GDP measure**

We must stress that irrespective of various limitations (misleading indicator, does not scale the sustainability of growth, ignores social costs, environmental outcomes and income inequality, and etc.) GDP is and will still be a crucial indicator of the economic health of a country, as well as a gauge of a country's standard of living. We have to be objective as well and state that standard measures such as GDP do have an enormous impact on policy goals and regulations, public and academic discourse as well the media since it is a powerful accountability mechanism (Boyd, 2009) that is objective, scientific and rule-driven, politically and institutionally independent and allows us to observe a complex economic system on an aggregate and disaggregate level. In this paper, we use GDP and its alternative, the Green GDP, as an objective measure compared to a Happiness index that is a subjective measure. The core method that we will use in this paper is a spectral analysis of data, which is often applied in the evaluation of the cyclical nexus between the variables. Namely, the spectral analysis is used primarily to analyze the degree in which the GDP, green GDP and the index of happiness are connected. The analysis led us to the conclusion that the environmental component represents an important part of the satisfaction and happiness of the people.

## **2. A SHORT REVIEW OF THE LITERATURE**

There are several papers similar to the topic of this paper, but there is no paper dealing with an identical research question. Most of the authors deal with the problems of GDP and its disadvantages. There are a large number of papers about GDP deficits as a measure, or the question which indicator would be better. One interesting paper is that of Ivkovic (2016) entitled "Limitations of GDP as a measure of progress and well-being." This paper aims to evaluate about GDP as a universal measure of economic progress and the common good. The author concludes that GDP as an economic measure is imprecise, wrong and that it is just a

monetary measure. This paper seeks to present the shortcomings of GDP throughout history. Dynan and Sheiner (2018) in their paper deal with a similar theme of the benefits of GDP as a measure of economic well-being. Even though their work mentions all the negative aspects of the GDP as a measure, the conclusion is that GDP and other parts of GDP through the system of national accounts are useful and provide a large amount of information on which economic well-being can be determined. The work dealing with the same subject is also done by the authors of (Kula et al, 2010) entitled "Real GDP, Well-Being and Happiness", in which authors try to find an answer to the question of GDP's effectiveness as a measure of economic well-being. What distinguishes this work from others is the comparison of real GDP with state aid measures on goods and services and with indexes of happiness and life satisfaction. Countries for which indices and GDP are observed are OECD countries. As a conclusion of their work, the correlation between different happiness indices is negligible compared to real GDP. Such a conclusion contradicts most of the other researches mentioned here. Apart from these papers, dealing with the disadvantages of GDP as a measure of economic well-being, we can also find papers with a congruent hypothesis to our study, i.e. whether GDP growth can boost the growth of the index of happiness and if there exists a long-term and short-term correlation between these variables. One of such papers is the work of (Clark and Senik, 2011) entitled "Will GDP growth increase happiness in developing countries?". The emphasis of this paper is whether only GDP growth in poor countries and developing countries can affect the growth of the Happiness index, or whether this index of happiness in developed countries will not only increase with GDP growth but also with some other measures. The result suggests that there is a greater degree of correlation between GDP growth and Happiness index growth in the poorer countries than in rich and developed countries. The explanation is logical because after a certain level of development the society is progressing and developing and (only) money is no more as important as it is the pollution rate or the usability of natural resources etc. Additionally, the authors outlined that the correlation is much smaller in the long-term than in the short-term. Likewise, Easterlin (2013), in his work titled "Happiness and Economic Growth: The Evidence", evaluates the short-term and long-term relationship between GDP and the index of economic prosperity for poor developed and transition economies. He came to the conclusion that long-term correlations do not exist, for the nexus is built only on the short-term basis. Unlike other works, this paper has shown the link between underdeveloped and developed countries.

### **3. DATA, METHODOLOGY AND RESULTS**

Data for our study were collected from the International Financial Statistics (IFS) database and the United Nations Sustainable Development Solutions Network. We looked at the following variables: gross domestic product (GDP), green gross domestic product (Green GDP) and the Happiness index. Data for all countries were taken for the years available (ranging from 2008 to 2016) in their annual form. The data for these variables are shown in the Appendix through Tables 1, 2 and 3. From Chart 1 we can see that there is a positive correlation between the selected output variables and the Happiness index. We can also see that there exists a positive correlation between the Green GDP and the Happiness index and it is slightly higher through all years in comparison to the GDP-Happiness index relation. Additionally, we can notice that the correlation coefficients were highest for 2008 with decreasing tendencies afterwards.

#### **3.1. Singular and Multi-channel spectral analysis**

Singular spectrum analysis (SSA) is a new technique in the time series analysis, which incorporates the elements of classical time series analysis, multivariate statistics, multivariate geometry, dynamical systems, and signal processing. The spectral analysis explores the cyclical patterns of data, and its primary purpose is to decompose the original series on an infinite sum

of periodic functions, each of which has a different frequency. The advantage, hence the uniqueness of spectral analysis is that it enables the identification and characterization of nonlinear trends and dominant cycle, including permanent and seasonal components, which characterize each time series. The basic version of SSA consists of four steps, which are performed as follows (Golyandina, Nekrutkin and Zhigljavsky, 2001). Let  $F = (f_0, f_1, \dots, f_{N-1})$  be a time series of length  $N$ , and  $L$  be an integer, which will be called the “window length”. We set  $K = N - L + 1$  and define the  $L$ -lagged vectors  $X_j = (f_{j-L}, \dots, f_{j-1})^T$ ,  $j = 1, 2, \dots, K$ , and the trajectory matrix:

$$X = (f_{i+j-s})_{i,j=1}^{L,K} = [X_1: \dots: X_K] \quad (1)$$

Note that the trajectory matrix  $X$  is a Hankel matrix, which means that all the elements along the diagonal  $i + j = \text{const}$  are equal. The construction of the trajectory matrix constitutes the first step of the algorithm. The second step is the singular value decomposition (SVD) of the matrix  $X$ , which can be obtained via eigenvalues and eigenvectors of the matrix  $S = XX^T$  of size  $L \times L$ . This provides us with a collection of  $L$  singular values, which are the square roots of the eigenvalues of the matrix  $S$ , and the corresponding left and right singular vectors. The left singular vectors of  $X$  are the orthonormal eigenvectors of  $S$ , we often called them “empirical orthogonal functions” or simply EOFs. The right singular vectors can be regarded as the eigenvectors of the matrix  $X^T X$ . We thus obtain a representation of  $X$  as a sum of rank-one biorthogonal matrices  $X_i$  ( $i = 1, \dots, d$ ), where  $d$  ( $d \leq L$ ) is the number of nonzero singular values of  $X$ . At the third step, we split the set of indices  $I = \{1, \dots, d\}$  into several groups  $I_1, \dots, I_m$  and sum the matrices  $X_i$  within each group. The result of the step is the representation:

$$X = \sum_{k=1}^m X_{I_k}, \text{ where } X_{I_k} = \sum_{i \in I_k} X_i \quad (2)$$

At the fourth step, averaging over the diagonals  $i + j = \text{const}$  of the matrices  $X_{I_k}$  is performed. This gives us SSA decomposition; that is, a decomposition of the original series  $F$  into sum of the series:

$$f_n = \sum_{k=1}^m f_n^{(k)}, n = 0, \dots, N-1, \quad (3)$$

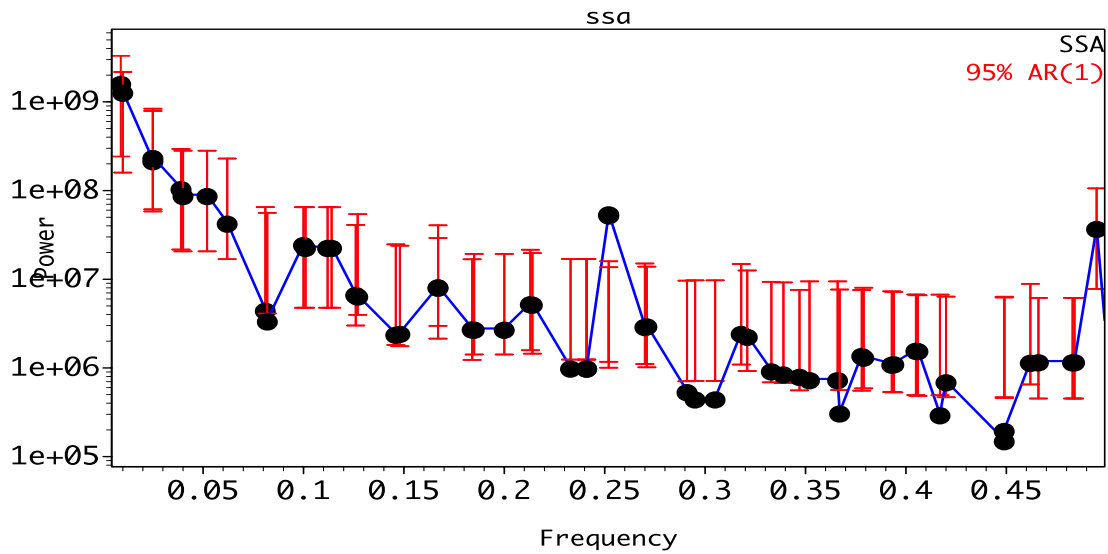
where for each  $k$  the series  $f_n^{(k)}$  is the result of diagonal averaging of the matrix  $X_{I_k}$ .

SSA is usually regarded as a method of identifying and extracting oscillatory components from the original series. The standard literature does not pay enough attention to theoretical aspects which are very important for understanding how to select the SSA parameters and, first of all, the window length  $L$  for the different classes of time series. The concept of separability and related methodological aspects together with robust empirical results provide us with this understanding. The choice of parameters in performing the SSA decomposition (they are the window length  $L$  and the way of grouping the matrices  $X_i$ ) must depend on the properties of the original series and the purpose of the analysis. The general purpose of the SSA analysis is the decomposition (3) with additive components  $f_n^{(k)}$  that are “independent” and “identifiable” time series; this is what we mean when we talk about analyzing the structure of time series by SSA. Sometimes, one can also be interested in particular tasks, such as ‘extraction of signal from noise,’ ‘extraction of oscillatory components’ and ‘smoothing’. For an adequately made SSA decomposition, a component  $f_n^{(k)}$  in (3) can be identified as a trend of the original series,

an oscillatory series (for example, seasonality) or noise. An oscillatory series is a periodic or quasi-periodic series, which can be either pure or amplitude-modulated. Noise is an aperiodic series. The trend of the series is, roughly speaking, a slowly varying additive component of the series with all the oscillations removed. Note that no parametric model for the components in (3) is fixed and these components are produced by the series itself. Thus, when analyzing real-life series with the help of SSA one can hardly hope to obtain the components in the decomposition (3) as exact harmonics or linear trend, for example, even if these harmonics or linear trend are indeed present in the series (by a harmonic we mean any specific time series with some amplitude, frequency, and phase). This is an influence of noise and a consequence of the non-parametric nature of the method. In many cases, we can get a good approximation of these series, (Hassani, 2007). Multi-channel SSA (or M-SSA) is a natural extension of SSA to a multivariate time series of vectors or maps. In the literature, extended EOF (EEOF) analysis is often assumed to be synonymous with M-SSA. The two methods are both extensions of the classical principal component analysis (PCA), but they differ in emphasis: EEOF analysis typically utilizes a number  $L$  of spatial channels much greater than the number  $M$  of temporal lags, thus limiting the temporal and spectral information. In M-SSA, on the other hand, based on the single-channel experience, one usually chooses  $L \leq M$ . Often M-SSA is applied to a few principal PCA components of the spatial data, with  $M$  chosen large enough to extract detailed temporal and spectral information from the multivariate time series (Javed et al, 2012). The MSSA allows in the same way as SSA to decompose the time series into its spectral components. Like in single-variate SSA, we are thus able to identify trends and oscillating pairs. However, in contrast to SSA, the MSSA also takes cross-correlations into account, where MSSA is a combination of SSA and principal component analysis (PCA). The individual RCs of the different time series are connected; they represent the same spectral part. We are hence able to identify oscillatory components that are intrinsic to all time series. (Groth and Ghill, 2011). Figure 1. displays singular spectrum analysis of eigenspectrum decompositions of GDP and Happiness index. We see that the trend component in all the series is significant, with two SSA components explaining almost 48.9% to 61% of the variance in all the series. Trend component is correctly identified by SSA 1-2 as it is visible from the graphical presentation. Error bands (95% confidence level) are estimated from surrogate series against the null hypothesis (red noise). Identified spectral components fall into the error band with the SSA 1-2 at the 90% confidence level. Dots (representing evaluated eigenvalues) falling into 5<sup>th</sup> and 95<sup>th</sup> red noise percentile are not statistically significant from the red noise. Oscillatory components i.e. the signal SSA 11-12 is statistically significant for it explain 31% of the total variance in the GDP series. In this particular case, the eigenvalues 11-12 indicate components whose power is considerably different from the simulated red noise. Oscillatory signal SSA 3-4 is statistically significant for it explains 31% of the total variance in the Happiness index series.

*Figure following on the next page*

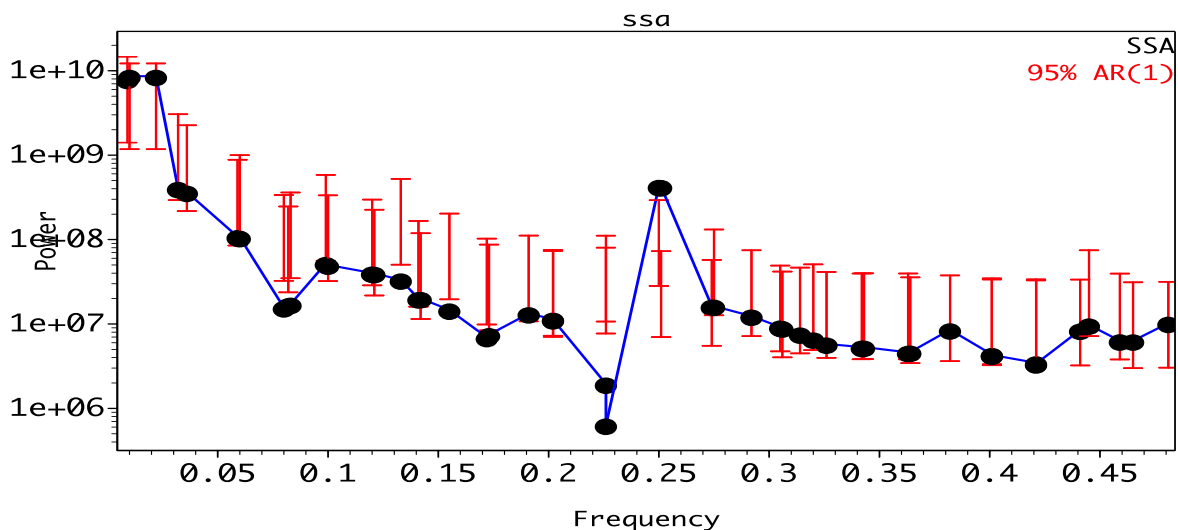
Figure 1: Singular spectrum analysis of GDP and Happiness index



Source: Authors' calculation

Next, Figure 2. displays singular spectrum analysis of eigenspectrum decompositions of the Green GDP and the Happiness index. We see that the trend component in all the series is significant, with two SSA components explaining almost 58.9% to 71% of the variance in all the series. Trend component is correctly identified by SSA 1-2 as it is visible from the graphical presentation. Error bands (95% confidence level) are estimated from surrogate series against the null hypothesis (red noise). Identified spectral components fall into the error band with the SSA 1-2 at the 90% confidence level. Dots (representing evaluated eigenvalues) falling into 5<sup>th</sup> and 95<sup>th</sup> red noise percentile are not statistically significant from the red noise. An oscillatory component, i.e. the signal SSA 7-8 is statistically significant for it explains 43% of the total variance in the Green GDP series. In this particular case, the eigenvalues 7-8 indicate components whose power is considerably different from the simulated red noise. Oscillatory signal SSA 5-6 is statistically significant for it explains 51% of the total variance in the Happiness index series. From this, we can conclude that Green GDP is a better indicator than the GDP itself, what is shown in spectral analysis results.

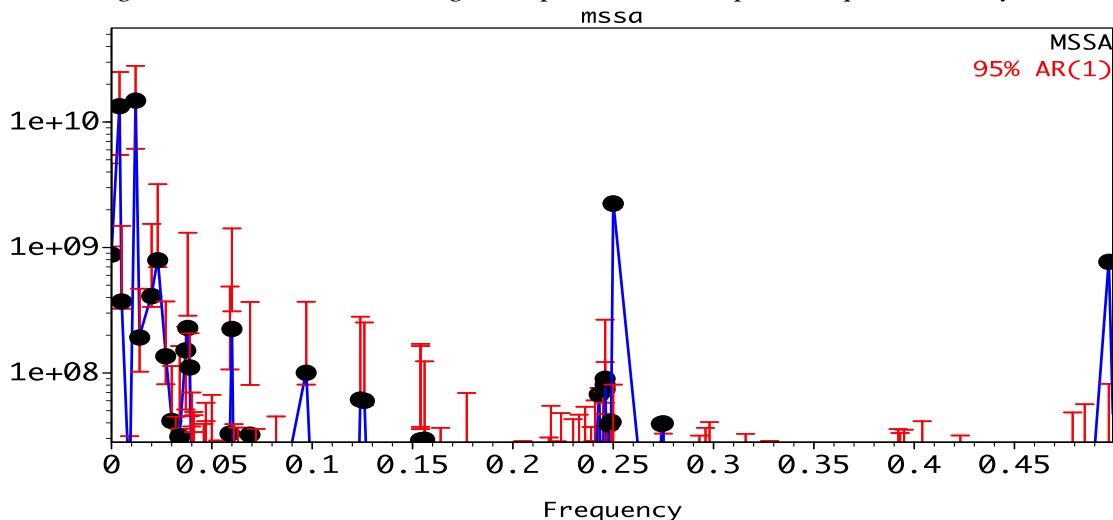
Figure 2: Singular spectrum analysis of Green GDP and Happiness index



Source: Authors' calculation

From Figure 3 we can notice that the trend component in the series is strong, with two SSA components explaining almost 79,8% of the variance in the Green GDP series. Trend component clearly identified by SSA 1-2 is visible from the figure (9). Error bands (95% confidence level) are estimated from surrogate series against the null hypothesis (red noise). Identified spectral components fall into the error band with the SSA 1-2 at the 90% confidence level. Dots (representing evaluated eigenvalues) falling into 5th and 95th red noise percentile are not statistically significant from the red noise. Figure 3 suggests that one signal (variable) is a candidate for an explanation of the behaviour of the Green GDP. To check that identified eigenvalue pairs are statistically significant, we check their phase dynamics (phase quadrature). Since the identified eigenvalue pairs meet the phase quadrature test, there is indeed a statistically significant relationship between Green GDP and the Happiness index. The relation between Green GDP and identified MSSA components (time series oscillators) is not a consequence of random shocks, but related co-movements in the phase space (phase difference). Identified time series (statistically significant at 5% significance level) related to the shocks in the Green GDP, i.e. oscillatory components related to changes in Green GDP dynamics is observed Happiness index.

Figure 3: Multi-channel Singular Spectrum/Principal Component Analysis



Source: Authors' calculation

From the above results we can conclude that spectral analysis detects a much stronger correlation between the GDP and Happiness index than the pairwise correlation. We can also notice that the Green GDP, compared to standard output measure, provides better results when confronting it with the Happiness index. Namely, we found greater correlation, i.e. the nexus between the Green GDP and the Happiness index suggesting that the awareness about the burning ecological problems in the world is becoming more and more important for the economy, both on the national and personal level. What spectral analysis enables is also to prove the existence of cyclical correlation between the observed variables, which in this case does not exist.

#### 4. CONCLUSION

Our study investigated the relationship between GDP as a universal measure of economic progress and a nation's Happiness index. As an additional objective of the paper, we have shown the relationship between the Green GDP and the Happiness index as an alternative form of economic progress.

Green GDP is a measure that contains additional variables that the standard GDP does not take into account, such as various sociological costs and environmental costs. Given a substantial number of papers dealing with the topic of correlation between the GDP and Happiness index, our paper contributes to the research field with the introduction of a new alternative indicator the Green GDP and a spectral analysis technique that was used to provide a better view of the correlation between observed variables. Based on the results we can conclude that there is a more significant link between the Green GDP and the Happiness index than between the standard GDP indicator with that index. The result itself is confirmed through correlation coefficients but also through single and multi-channel spectral analysis techniques. The results implied that people are generally happier when they are aware that their prosperity and wellbeing is assessed by standard economic indicators that are also augmented by the costs of pollution, exploitation of natural resources, etc. Economic progress itself (as a statistical figure) is not enough intrinsic to be acknowledged as the increase in satisfaction of a country's population. When observing economic growth and development, it is necessary to take into account the costs of this economic progress in the form of pollution, excessive destruction and exploitation of natural resources, non-market economy, income inequality, loss of leisure and etc. which leaves long-term consequences on economy as well as on society. With the development of society, the financial aspect of growth is no longer so as important as it was in the past, consequently it is not exclusively essential for general satisfaction or happiness of the people or the nation as a whole.

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## APPENDIX

Table 1: GDP (2008-2016)

		GDP 2008	GDP 2009	GDP 2010	GDP 2011	GDP 2012	GDP 2013	GDP 2014	GDP 2015	GDP 2016
Belgium	BEL	5,1863E+11	4,8455E+11	4,8355E+11	5,27008E+11	4,97884E+11	5,20925E+11	5,31076E+11	4,552E+11	4,67956E+11
Bulgaria	BGR	5,4409E+10	5,1884E+10	5,061E+10	57418391042	53903028252	55758744571	56732006512	50199117547	53237882473
Czech Republic	CZE	2,3572E+11	2,0618E+11	2,0748E+11	2,27948E+11	2,07376E+11	2,09402E+11	2,07818E+11	1,8683E+11	1,95305E+11
Denmark	DNK	3,5336E+11	3,2124E+11	3,22E+11	3,44003E+11	3,27149E+11	3,43584E+11	3,52994E+11	3,01298E+11	3,069E+11
Estonia	EST	2,4194E+10	1,9652E+10	1,9491E+10	23170239901	23043864510	25137153149	26224622451	22566956982	23337907619
Germany	DEU	3,7524E+12	3,418E+12	3,4171E+12	3,7577E+12	3,54398E+12	3,75251E+12	3,89061E+12	3,37561E+12	3,4778E+12
Greece	GRC	3,5446E+11	3,3E+11	2,9936E+11	2,87798E+11	2,45671E+11	2,39862E+11	2,3703E+11	1,95542E+11	1,92691E+11
Ireland	IRL	2,7502E+11	2,3631E+11	2,2195E+11	2,39019E+11	2,25572E+11	2,39389E+11	2,58099E+11	2,90617E+11	3,04819E+11
Spain	ESP	1,635E+12	1,4991E+12	1,4316E+12	1,48807E+12	1,33602E+12	1,36185E+12	1,37691E+12	1,19779E+12	1,23726E+12
France	FRA	2,9235E+12	2,6938E+12	2,6468E+12	2,86268E+12	2,68142E+12	2,80851E+12	2,84931E+12	2,43356E+12	2,46545E+12
Croatia	HRV	7,0481E+10	6,2703E+10	5,9665E+10	62236751773	56485301967	57769872075	57080369368	48921877448	50714957391
Italy	ITA	2,3907E+12	2,1852E+12	2,1251E+12	2,27629E+12	2,07282E+12	2,13049E+12	2,15173E+12	1,83235E+12	1,85891E+12
Cyprus	CYP	2,7839E+10	2,5943E+10	2,5562E+10	27427161523	25041372222	24084572491	23359294149	19676167240	20047013274
Latvia	LVA	3,5596E+10	2,617E+10	2,3757E+10	28223552825	28119996053	30314363219	31419072948	27009231911	27572698482
Lithuania	LTU	4,7851E+10	3,7441E+10	3,7121E+10	43476878139	42847900766	46473646002	48545251796	41402022148	42738875963
Luxembourg	LUX	5,585E+10	5,1371E+10	5,3212E+10	60004630234	56677961787	61739352212	66327344189	57784495265	58631324559
Hungary	HUN	1,58E+11	1,3059E+11	1,3092E+11	1,40782E+11	1,27857E+11	1,35216E+11	1,40118E+11	1,22879E+11	1,25817E+11
Malta	MLT	8977149553	8528202278	8741059603	9504797627	9203729739	10145944324	11217780149	10285547954	10999047580
Netherlands	NLD	9,3623E+11	8,5793E+11	8,3639E+11	8,93757E+11	8,28947E+11	8,6668E+11	8,79635E+11	7,57999E+11	7,77228E+11
Austria	AUT	4,3029E+11	4,0017E+11	3,9189E+11	4,3112E+11	4,09425E+11	4,30069E+11	4,41885E+11	3,82066E+11	3,908E+11
Poland	POL	5,3382E+11	4,4035E+11	4,7926E+11	5,28725E+11	5,00284E+11	5,24201E+11	5,45076E+11	4,7728E+11	4,71364E+11
Portugal	PRT	2,6201E+11	2,4375E+11	2,383E+11	2,44895E+11	2,16368E+11	2,26073E+11	2,2963E+11	1,9942E+11	2,04837E+11
Romania	ROU	2,0818E+11	1,6742E+11	1,68E+11	1,85363E+11	1,71665E+11	1,91549E+11	1,99493E+11	1,77911E+11	1,87592E+11
Slovenia	SVN	5,559E+10	5,0245E+10	4,8014E+10	51290792018	46352802766	48116256926	49904928335	43072415017	44708598649
Slovak Republi	SVK	1,0032E+11	8,8946E+10	8,9501E+10	98181259740	93413992956	98478349315	1,00948E+11	87501423882	89768598023
Finland	FIN	2,8374E+11	2,515E+11	2,478E+11	2,73674E+11	2,56706E+11	2,6998E+11	2,72609E+11	2,32439E+11	2,38503E+11
Sweden	SWE	5,1397E+11	4,2966E+11	4,8838E+11	5,6311E+11	5,43881E+11	5,78742E+11	5,73818E+11	4,97918E+11	5,1446E+11
United Kingdor	GBR	2,8906E+12	2,3828E+12	2,4412E+12	2,6197E+12	2,66209E+12	2,73982E+12	3,02283E+12	2,88557E+12	2,6479E+12
Iceland	ISL	1,764E+10	1,2887E+10	1,3255E+10	14674650435	14218575093	15479256845	17178962757	16783714958	20047413006
Norway	NOR	4,6255E+11	3,8662E+11	4,2913E+11	4,98832E+11	5,10229E+11	5,23502E+11	4,99339E+11	3,86663E+11	3,71076E+11
Montenegro	MNE	4545674528	4159330370	4139192053	4538198499	4087724528	4464260489	4587928884	4052913386	4374127212
Macedonia, FY	MKD	9909548411	9401731496	9407168702	10494632699	9745251126	10817712139	11362272838	10051659161	10899583155
Albania	ALB	1,2881E+10	1,2044E+10	1,1927E+10	12890867539	12319784787	12776277515	13228244357	11335264967	11863865978
Serbia	SRB	4,926E+10	4,2617E+10	3,946E+10	46466728667	40742313861	45519650911	44210806366	37160332465	38299854688
Turkey	TUR	7,6434E+11	6,4464E+11	7,7188E+11	8,32546E+11	8,73982E+11	9,50595E+11	9,34168E+11	8,59794E+11	8,63712E+11
Moldova	MDA	6054806101	5439422031	5811604052	7015206498	7284686576	7985349731	7983271111	6512899540	6749515655
United States	USA	1,4719E+13	1,4419E+13	1,4964E+13	1,55179E+13	1,61553E+13	1,66915E+13	1,73931E+13	1,81207E+13	1,86245E+13
Australia	AUS	1,0553E+12	9,2717E+11	1,1429E+12	1,39056E+12	1,53819E+12	1,56718E+12	1,4596E+12	1,34538E+12	1,20462E+12
Japan	JPN	5,0379E+12	5,2314E+12	5,7001E+12	6,15746E+12	6,20321E+12	5,15572E+12	4,84873E+12	4,38308E+12	4,94016E+12
China	CHN	4,5982E+12	5,11E+12	6,1006E+12	7,57255E+12	8,56055E+12	9,60722E+12	1,04824E+13	1,10647E+13	1,11991E+13
Chile	CHL	1,7964E+11	1,7239E+11	2,1854E+11	2,52252E+11	2,67122E+11	2,78384E+11	2,6099E+11	2,42518E+11	2,47028E+11
Israel	ISR	2,1584E+11	2,0742E+11	2,3361E+11	2,61629E+11	2,57297E+11	2,92489E+11	3,08417E+11	2,99096E+11	3,17745E+11
Mexico	MEX	1,1013E+12	8,9495E+11	1,0511E+12	1,17119E+12	1,1866E+12	1,26198E+12	1,29846E+12	1,15226E+12	1,04692E+12
Switzerland	CHE	5,5436E+11	5,4151E+11	5,8378E+11	6,9958E+11	6,68044E+11	6,88504E+11	7,09183E+11	6,79289E+11	6,68851E+11

Source: IFS database

Table following on the next page

Table 2: Green GDP (2008-2016)

		GREEN 2008	GREEN 2009	GREEN 2010	GREEN 2011	GREEN 2012	GREEN 2013	GREEN 2014	GREEN 2015	GREEN 2016
Belgium	BEL	5,16331E+11	4,8173E+11	4,80158E+11	5,25148E+11	4,96072E+11	5,19083E+11	5,29326E+11	4,53458E+11	4,66167E+11
Bulgaria	BGR	53141297703	50953324168	49455945602	56031495909	52609050938	54659813795	55640006020	49106576700	52029017951
Czech Repub	CZE	2,33178E+11	2,04319E+11	2,054E+11	2,25802E+11	2,05571E+11	2,07748E+11	2,06175E+11	1,85141E+11	1,93544E+11
Denmark	DNK	3,46303E+11	3,16844E+11	3,16957E+11	3,37943E+11	3,21264E+11	3,38753E+11	3,48787E+11	2,98476E+11	3,03918E+11
Estonia	EST	23840475261	19344394316	19107201455	22765748214	22647951720	24707115338	25811087938	22160617864	22935967138
Germany	DEU	3,73585E+12	3,40396E+12	3,40254E+12	3,74264E+12	3,52896E+12	3,73789E+12	3,87656E+12	3,36204E+12	3,46359E+12
Greece	GRC	3,52514E+11	3,28489E+11	2,97726E+11	2,86047E+11	2,44081E+11	2,38553E+11	2,35724E+11	1,94343E+11	1,91454E+11
Ireland	IRL	2,74293E+11	2,35669E+11	2,21165E+11	2,38311E+11	2,24922E+11	2,38753E+11	2,57417E+11	2,90028E+11	3,04133E+11
Spain	ESP	1,62978E+12	1,49432E+12	1,42691E+12	1,4832E+12	1,33106E+12	1,35735E+12	1,37252E+12	1,19321E+12	1,23223E+12
France	FRA	2,91657E+12	2,68717E+12	2,63994E+12	2,85621E+12	2,67477E+12	2,80179E+12	2,84319E+12	2,42738E+12	2,45873E+12
Croatia	HRV	69866188589	62022718281	59142029676	61674712164	55758617435	57157614881	56523445680	48434148037	50188143408
Italy	ITA	2,3804E+12	2,17632E+12	2,11584E+12	2,26658E+12	2,06263E+12	2,12074E+12	2,14264E+12	1,824E+12	1,84987E+12
Cyprus	CYP	27722287397	25826956193	25448548749	27312619356	24932777287	23991925247	23266350393	19582900913	19947574577
Latvia	LVA	35249221981	25785523097	23398525697	27889340759	27798953891	29983611814	31074231891	26630497105	27173530668
Lithuania	LTU	47548040728	37197306799	36857874198	43203009666	42565947836	46207066715	48274616971	41134380748	42452516841
Luxembourg	LUX	55657153566	51207097829	53042251242	59821105587	56503708701	61579222228	66170931643	57625318671	58465774057
Hungary	HUN	1,56686E+11	1,29442E+11	1,2983E+11	1,39575E+11	1,26638E+11	1,3414E+11	1,39086E+11	1,21986E+11	1,24863E+11
Malta	MLT	8874712736	8448210228	8665552657	9413052545	9116978148	10062230350	11128537144	10188708229	10894587264
Netherlands	NLD	9,27139E+11	8,5005E+11	8,30409E+11	8,8605E+11	8,18108E+11	8,56127E+11	8,70656E+11	7,51876E+11	7,70825E+11
Austria	AUT	4,27997E+11	3,98155E+11	3,89682E+11	4,28802E+11	4,07046E+11	4,27718E+11	4,39679E+11	3,80017E+11	3,88675E+11
Poland	POL	5,27093E+11	4,34563E+11	4,72754E+11	5,21516E+11	4,9351E+11	5,17835E+11	5,38935E+11	4,71285E+11	4,64926E+11
Portugal	PRT	2,60667E+11	2,42487E+11	2,37075E+11	2,43608E+11	2,15189E+11	2,24913E+11	2,28478E+11	1,9832E+11	2,03672E+11
Romania	ROU	2,04492E+11	1,64924E+11	1,65367E+11	1,81756E+11	1,679E+11	1,88379E+11	1,96532E+11	1,75601E+11	1,85119E+11
Slovenia	SVN	55283823153	49975069552	47728695778	51004746172	46084109754	47856909950	49668269308	42822219903	44445998481
Slovak Repub	SVK	99746751787	88430648222	88921436487	97627785593	92882036042	97948315406	1,00443E+11	86991085490	89234421270
Finland	FIN	2,81514E+11	2,49766E+11	2,45405E+11	2,70965E+11	2,5423E+11	2,67678E+11	2,70342E+11	2,30267E+11	2,36219E+11
Sweden	SWE	5,10884E+11	4,27065E+11	4,84788E+11	5,59415E+11	5,40535E+11	5,75143E+11	5,7055E+11	4,94384E+11	5,10746E+11
United Kingdom	GBR	2,85511E+12	2,35784E+12	2,41464E+12	2,58993E+12	2,63511E+12	2,71634E+12	3,00224E+12	2,87056E+12	2,63173E+12
Iceland	ISL	17480360670	12692680642	13103607658	14519209385	14059002242	15296776820	16992484793	16571845699	19816679857
Norway	NOR	4,20521E+11	3,58099E+11	4,01488E+11	4,64522E+11	4,76068E+11	4,9382E+11	4,69171E+11	3,6638E+11	3,50384E+11
Montenegro	MNE	4488900579	4125074983	4089437423	4486507863	4042890493	4422834313	4543986365	4010236793	4325986712
Macedonia, FYR	MKD	9574232815	9181642956	9065954778	10098883879	9383104125	10462000661	10993908646	9656387398	10484023404
Albania	ALB	12757002869	11939391126	11747350668	12586417097	11988933997	12403880595	12831112148	11101238224	11610106456
Serbia	SRB	48325901713	41880692153	38617278016	45475900659	39877661306	44732877246	43545670310	36483774393	37616081486
Turkey	TUR	7,58967E+11	6,39821E+11	7,66273E+11	8,25709E+11	8,67033E+11	9,4385E+11	9,27488E+11	8,52914E+11	8,56492E+11
Moldova	MDA	5991853370	5379380740	5743682548	6944643213	7213127548	7900206809	7896371326	6420996688	6656094265
United States	USA	1,44736E+13	1,42907E+13	1,48302E+13	1,53729E+13	1,60263E+13	1,65555E+13	1,72512E+13	1,80273E+13	1,85292E+13
Australia	AUS	1,00901E+12	8,9631E+11	1,10239E+12	1,3428E+12	1,4976E+12	1,52717E+12	1,42107E+12	1,3196E+12	1,17797E+12
Japan	JPN	5,0208E+12	5,21576E+12	5,68259E+12	6,1396E+12	6,18483E+12	5,13696E+12	4,83041E+12	4,36437E+12	4,91875E+12
China	CHN	4,02048E+12	4,80957E+12	5,72873E+12	7,11113E+12	8,20148E+12	9,27409E+12	1,01991E+13	1,08421E+13	1,09574E+13
Chile	CHL	1,63319E+11	1,57726E+11	1,96465E+11	2,29212E+11	2,44234E+11	2,56417E+11	2,38731E+11	2,20915E+11	2,24355E+11
Israel	ISR	2,1444E+11	2,06445E+11	2,32606E+11	2,60461E+11	2,55988E+11	2,91084E+11	3,07088E+11	2,97817E+11	3,164E+11
Mexico	MEX	1,03948E+12	8,59001E+11	1,00561E+12	1,10562E+12	1,12053E+12	1,20271E+12	1,24698E+12	1,12433E+12	1,01782E+12
Switzerland	CHE	5,53503E+11	5,40639E+11	5,82929E+11	6,98768E+11	6,67208E+11	6,87628E+11	7,08373E+11	6,78439E+11	6,67961E+11

Source: Authors' calculation based on Stjepanović, Tomić and Škare (2017)

Table following on the next page

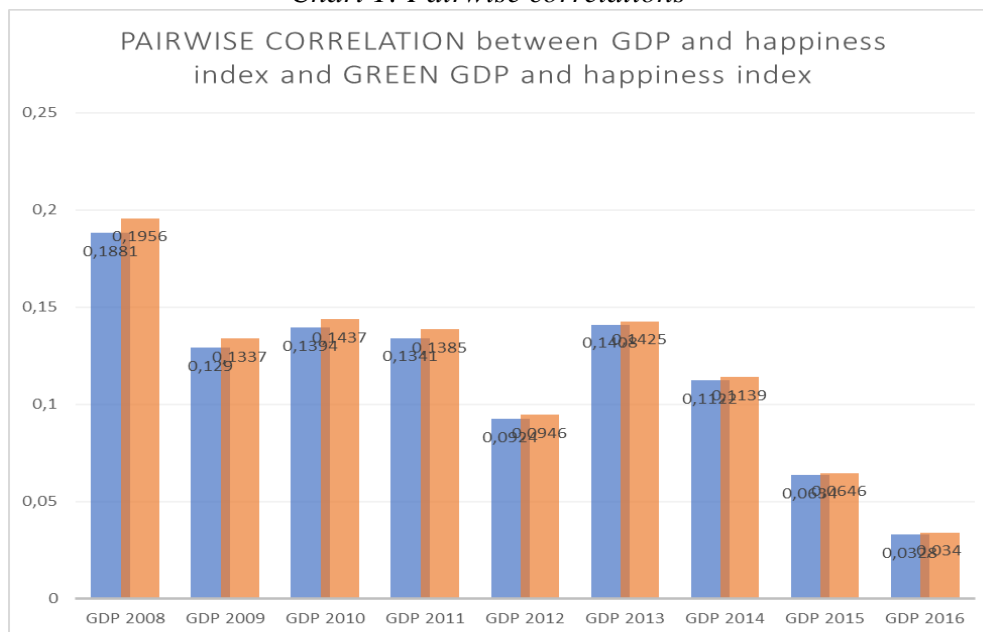
Table 3: Happiness index (2008-2016)

		HAPP 2008	HAPP 2009	HAPP 2010	HAPP 2011	HAPP 2012	HAPP 2013	HAPP 2014	HAPP 2015	HAPP 2016
Belgium	BEL	7,116591	6,958423	6,8535142	7,1113639	6,935122	7,103661	6,855329	6,9042192	6,9489365
Bulgaria	BGR	3,8437979	3,794568	3,9122763	3,8753824	4,2222972	3,993021	4,4384398	4,8654013	4,8375607
Czech Rep	CZE	6,4392567	6,5001941	6,2496176	6,331491	6,3341494	6,697656	6,4837298	6,6080174	6,7356272
Denmark	DNK	7,970892	7,6833587	7,7705154	7,7705154	7,5199094	7,588607	7,5075593	7,5144248	7,5577826
Estonia	EST	5,4519377	5,1377387	5,3710546	5,4868197	5,3639278	5,363928	5,5559826	5,6289086	5,6496754
Germany	DEU	6,52179	6,6414933	6,7245312	6,6213121	6,7023621	6,965125	6,9842143	7,0371375	6,8737631
Greece	GRC	6,6469612	6,0385747	5,8395586	5,3720398	5,096354	4,720251	4,756237	5,622519	5,3026195
Ireland	IRL	7,5680299	7,0459113	7,2573895	7,0069041	6,9646454	6,760085	7,0183792	6,8301253	7,0407314
Spain	ESP	7,2944727	6,1986012	6,1882625	6,518249	6,2906904	6,150027	6,4564776	6,3806634	6,3186121
France	FRA	7,0080647	6,2834983	6,7979012	6,9591851	6,6493654	6,667121	6,4668679	6,357625	6,4752088
Croatia	HRV	5,8209076	5,4333196	5,5955753	5,3853726	6,0276346	5,885463	5,3806925	5,2054381	5,296584
Italy	ITA	6,7797742	6,3338003	6,354238	6,0570865	5,839314	6,009374	6,0265851	5,8476839	5,954524
Cyprus	CYP	6,2379584	6,8334775	6,3865461	6,6896086	6,1805072	5,438952	5,6271238	5,4391613	5,7946186
Latvia	LVA	5,1453753	4,6689105	4,856498	4,9668117	5,1250253	5,06977	5,7291155	5,8805976	5,9404464
Lithuania	LTU	5,553926	5,4669209	5,065825	5,4324374	5,7710371	5,595689	6,1257238	5,7113781	5,8655524
Luxembou	LUX	6,7654248	6,9579201	7,0972519	7,1014004	6,964097	7,130809	6,8911271	6,7015715	6,9673409
Hungary	HUN	5,1939335	4,8946004	4,721325	4,9176025	4,6833582	4,914467	5,1805634	5,3443832	5,4489017
Malta	MLT	6,112541	6,3276396	5,7738748	6,1547184	5,962872	6,379925	6,4521179	6,6133943	6,5908422
Netherlan	NLD	7,631012	7,4518795	7,5018759	7,563798	7,4707155	7,40655	7,3211884	7,3244371	7,5408773
Austria	AUT	7,180954	7,122115	7,3026786	7,4705129	7,4006886	7,498803	6,9499998	7,076447	7,0480719
Poland	POL	5,8861375	5,7720275	5,8870296	5,6462049	5,8759317	5,746132	5,7502823	6,0070219	6,1620765
Portugal	PRT	5,7169666	5,4052463	5,0945258	5,2199979	4,9939623	5,157688	5,1269116	5,0808663	5,4466372
Romania	ROU	5,393724	5,3675652	4,9091659	5,0227575	5,1668749	5,018585	5,7268934	5,7774911	5,9688706
Slovenia	SVN	5,8112645	5,8301606	6,0825553	6,035964	6,062891	5,974889	5,6783953	5,7406421	5,9368215
Slovak Rep	SVK	5,2646766	5,3458548	6,0522232	5,9450483	5,9110594	5,936527	6,1388731	6,1620045	5,9931631
Finland	FIN	7,6706266	7,6724491	7,3932643	7,3542252	7,4202094	7,444636	7,3845711	7,4479256	7,6598434
Sweden	SWE	7,5159974	7,2659774	7,4960189	7,3822322	7,5601478	7,434011	7,2391477	7,2889223	7,3687444
United Kin	GBR	6,9864635	6,9065471	7,0293641	6,8692489	6,880784	6,918055	6,7581477	6,5154452	6,8242836
Iceland	ISL	6,8882842	6,512457	6,954812	6,845785	7,5906601	7,501394	7,4895845	7,4980707	7,5100346
Norway	NOR	7,4156823	7,6322875	7,5748547	7,4254854	7,678277	7,548789	7,4444709	7,6034336	7,5963316
Monteneg	MNE	5,1963153	4,8010602	5,4550304	5,2231169	5,2187243	5,074342	5,2827206	5,1249213	5,3040662
Macedoni	MKD	4,4935985	4,4280219	4,180202	4,89818	4,6396475	5,186191	5,203826	4,9755898	5,345746
Albania	ALB	4,6342516	5,4854698	5,2689366	5,8674216	5,5101242	4,550648	4,8137631	4,6066508	4,5111008
Serbia	SRB	4,7503839	4,380312	4,4613042	4,8115187	5,1545219	5,101841	5,1127286	5,3176851	5,7527547
Turkey	TUR	5,1182318	5,2128415	5,4903474	5,271944	5,3090763	4,888177	5,5797944	5,5144653	5,3262219
Moldova	MDA	5,5027561	5,5543742	5,5897365	5,7922626	5,9957128	5,756059	5,9170585	6,0174723	5,5777841
United Sta	USA	7,280386	7,1580324	7,1636162	7,1151385	7,026227	7,249285	7,1511145	6,8639469	6,8035998
Australia	AUS	7,2853909	7,2537575	7,450047	7,4056163	7,1955857	7,364169	7,2885504	7,3090606	7,2500801
Japan	JPN	5,9106793	5,8449993	6,0567527	6,2627935	5,9682164	5,959362	5,9226208	5,8796844	5,9546509
China	CHN	4,8462949	4,454361	4,6527367	5,0372076	5,0949173	5,24109	5,1956191	5,3038778	5,3249559
Chile	CHL	5,7894387	6,4936862	6,6356559	6,5263348	6,5991287	6,740154	6,8442383	6,5327497	6,5790563
Israel	ISR	7,2612615	7,3529792	7,3589163	7,4331479	7,1108546	7,320563	7,400574	7,079411	7,1590109
Mexico	MEX	6,8290362	6,9628191	6,8023887	6,9095154	7,3201852	7,442546	6,679831	6,2362871	6,824173
Switzerlar	CHE	7,4732546	7,5245209	7,5876256	7,6132556	7,7762089	7,567847	7,4928036	7,5721369	7,4585199

Source: United Nations Sustainable Development Solutions Network

Chart following on the next page

*Chart 1: Pairwise correlations*



*Source: Author calculation*

## COUNTERFEITING AND MISUSE OF PAYMENT CARDS

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### ABSTRACT

*The main subject matter of the paper is counterfeiting and misuse of payment cards and its adverse effect on business legal environment. The paper is focused on determining the concept of payment cards, their types, origin, but also their misuses in everyday usage. Due to enormous technical and technological development in the preceding years, non-cash payment has been on the increase, which is, in addition to other manners, also realised by payment cards. A detailed analysis of the legislation governing this area in the Republic of Serbia, but also in the neighbouring countries, is also given in the paper. The last part of the paper comprises the empirical analysis of the number of committed criminal offences with payment cards on the territory of the Republic of Serbia in the previous five years. Therefore, the number of registered, indicted and sentenced offenders for the offence of counterfeiting and misuse of payment cards is analysed.*

**Keywords:** *business, payment cards, counterfeiting of payment cards*

### 1. INTRODUCTION

Modern methods of payment, anywhere in the world, including the Republic of Serbia as well, cannot be imagined without payment cards. More precisely, they are instruments of non-cash payment that enable payment for goods and services anywhere and at any time, as well as withdrawal of cash. The advantages of using payment cards are in saving time both for cardholders and merchants, provide certain convenience and they are simple to use, offer high level of security in the event of losing a card and ability to dispose of money 24/7, and a possibility of making payments even though a cardholder may not have enough money at the moment as in the case of credit cards. However, because of their frequent usage, payment cards are the target of various misuses, which represent disadvantages of this method of payment. Namely, not a small number of people, which will be shown in the empirical part of the paper, do misuse and counterfeit payments cards. It is this segment that makes payment cards not so perfect method of payment. In the same way as it is possible for someone to purloin the cash you own by stealing your wallet for example, thus card usage may be a subject of card frauds and misuse of card information. Safety usage of payment cards is generally the greatest disadvantage of this method of non-cash payment.

### 2. CONCEPT, ORIGIN, TYPES AND DEVELOPMENT OF PAYMENT CARDS

According to Encyclopaedia Britannica the use of credit cards originated in the United States during the 1920s, when oil companies and hotel chains began issuing them to customers for purchases made for goods or services similar to a pro-forma invoice today. The first bank that issued credit cards was New York Flatbush National Bank from Brooklyn in 1946. As it is believed shortly after that, in 1950, Diners Club started issuing its own credit card, which was originally used for payments made in restaurants.

The idea was conceived when the founder of Diners Club Frank McNamara once dining in a restaurant did not have paper money to pay a bill. Thus Diners Club cards enabled the cardholders to dine in any restaurant that accepted the cards, while Diners would then settle their bills, which would come to maturity afterwards. A year after, i.e. in 1951, Franklin National Bank issued its first revolving credit card, which allowed cardholders to borrow money from the bank without former approval as long as they stayed within their credit limits. VISA card which exists today originated in 1958 when Bank of America issued its card BankAmericard – a precursor of VISA card. In 1966 Master card appeared as a competitor to VISA card. The credit cards that we have today have not always been like that. In the beginning they were in the form of tokens that is plastic and metal coins, pieces of cloth or paper. They obtained their modern-day look in the mid 1960's. First payments cards or so-called "plastic money" appeared in the mid twentieth century. In 1949 Frank McNamara invented a new method of payment in the form of a cardboard identification card. In fact, the card was a warranty of a cardholder's financial reliability to a certain amount, while payment at a point of sale where a purchase was made was guaranteed by a company that granted a spending limit on the basis of the assessment of the cardholder's solvency. The cardholder would either deposit money into a company that had issued the card or receive a certain credit line, and would pay for the expenditures incurred by using the card upon receiving a bill (Sikimic, 2007, pg. 7). Since then, we can see continuous development of non-cash payment which is increasingly used by participants of payment operations (Kovacevic, Djurovic, 2014, pg. 30). According to application, i.e. due date for a transaction, payment cards are divided into credit, debit, stored-value and electronic stored-value cards. Credit and debit cards are used for non-cash payments, and differ according to the time and manner a cardholder provides cover payment to a bank for a delivered service (Markovic, 2007, pg. 218). A debit card debits an account immediately after the usage of the card, while a credit card offers deferred payment to a bank, i.e. the bank in a certain way credits a client, that is the client borrows from the bank on monthly basis and pays off the outstanding balance in instalments. Therefore, debit cards are only issued by banks and they require coverage of the entire amount of expenditures at the moment of their usage. Credit cards can be issued not only by banks, but also by other financial organizations, and the payment is made on due date, with no interest charged or according to an agreed rate of payment with an interest charged (Stojanovic, 2012, pg. 669). Contrary to credit and debit cards, stored-value cards enable a cardholder to make cash payments to a certain amount out of his deposits on the bank account or granted loan. In this regard we may point to the following types of payment cards according to different criteria: (1) according to their look payment cards can be smooth and embossed; (2) according to the way data are stored on payment cards there are payment cards with magnetic stripe or payment cards with chip; (3) according to their application payment cards can be: international, national and corporate (Kresoja, 2010, pg. 44).

### **3. PAYMENT CARDS AND LEGISLATION**

Counterfeiting and misuse of payment cards is stipulated a criminal offence by Article 243 of the Criminal Code of the Republic of Serbia. Whoever fabricates a forged payment card or who alters a real payment card with intent to use it as genuine or who uses such payment card as genuine, shall be punished. If an offender is found guilty for committing such an offence, the offender may be punished by imprisonment from six months to five years and a fine. Pursuant to paragraph 2. of the same Article if the offender has acquired unlawful material gain through the use of altered payment cards or counterfeited cards, he shall be punished by imprisonment of one to eight years and a fine. If the unlawful material gain exceeds one million five hundred thousand dinars, the offender shall be punished by imprisonment of two to twelve years and a fine according to paragraph 3. of this Article. Under paragraph 4. the penalty shall be imposed also to whoever commits the offence through unauthorised use of another's card or confidential

information used for the execution of payment transactions. As for the penalty in this case, it may be the same as the one stipulated by paragraph 2., or paragraph 3. In addition, the RS Criminal Code provides for punishing whoever obtains a counterfeited payment card with intent to use it as genuine or whoever obtains information with intent to use it for fabrication of a forged payment card. The punishment for commission of such offence is fine or imprisonment up to three years. If such criminal activities occur, counterfeited credit cards shall be impounded (Criminal Code of the Republic of Serbia). It is significant to emphasize the fact that this offence has five forms. The basic form of this offence is committed if somebody obtains a counterfeited payment card, alters a genuine payment card or uses a counterfeited payment card. In this case on the subjective side of the offence there must be premeditation and intent to use a counterfeited card as a genuine. Undoubtedly the object of the offence is a payment card. Apart from the basic form, this offence has also two aggravated forms. The aggravated forms entail acquiring unlawful material gain through the use of a card (one stipulates that the amount of unlawfully acquired gain is insignificant and another stipulates that the gain has to be more than one million five hundred thousand dinars). In addition, the legislator has provided for minor forms of this offence in two events. In one event it is committed if a counterfeited payment card is obtained with intent to use it as a genuine, and in another event preparation to commit this offence is deemed a minor form of the offence. In addition to all the criminal sanctions that may be imposed for the commission of this offence impounding the object, i.e. a counterfeited payment card and all the objects ensuing from the commission of the offence, is always pronounced as well. Also, in order to understand these actions it is necessary to define the terms “fabricating”, “altering” and “using” of payment cards. Fabricating denotes making a counterfeited payment card out of the object that was not previously a genuine payment card (Matijasevic, 2013, pg. 120-121). Altering refers to the change of nature, look and content of a payment card, i.e. changing a genuine payment card so that it gains different look, and all with intent to use it as unaltered genuine payment card. The act of altering is usually carried out by erasing the slip with cardholder’s signature and replacing it by another signature. Any alteration of a payment card which has been expired or invalidated in order to make it look like a genuine, does not represent the altering of a genuine payment card, but fabricating a counterfeited payment card. Using refers to putting counterfeited or altered payment cards into circulation, i.e. their usage. Therefore, the act of this criminal offence is any usage of counterfeited or altered payment card as genuine. The offence is committed by mere usage of a payment card, i.e. it is not interpreted as an attempted offence, but as a committed offence if a perpetrator, when making a purchase, gives a payment card and it is uncovered to be counterfeited before goods are handed, or when withdrawing money from an ATM machine a false payment card is uncovered before money withdrawal (Ivanovic, 2011, pg. 7 & 8). In the Criminal Code of the Republic of Montenegro the criminal offence of counterfeiting and misuse of payment cards is classified among the criminal acts against payment operations and economic transactions. Article 260 of this Law stipulates that anyone who makes a false credit card or a card for non-cash payment or who alters a genuine credit or a card for non-cash payment with the intention of using it as a genuine one or who such a false card, or somebody else’s genuine card that is unlawfully obtained, acquires, holds, presents in order to use it shall be punished by imprisonment for a maximum term not exceeding three years. Therefore, it can be concluded that paragraph 1 comprises both the offence of counterfeiting payment cards and the offence of misuse of payment cards, which is different from the RS Criminal Code where a separate paragraph provides for misuse of payment cards. Under paragraph 2 of the Criminal Code of Montenegro anyone who obtains unlawful material gain by using a counterfeited card, shall be punished by an imprisonment sentence of six months to five years. If the obtained unlawful material gain is in the amount exceeding € 3000, the perpetrator shall be punished by an imprisonment sentence of one to eight years.

If the obtained unlawful material gain is in the amount exceeding € 30000, the perpetrator shall be punished by an imprisonment sentence of two to ten years (Criminal Code of Montenegro). Counterfeiting of payment cards is stipulated by the Criminal Code of the Republic of Croatia through the offence of counterfeiting documents under Article 278 paragraph 1, which provides for whoever forges a document or alters a genuine document with the aim that such document be used as genuine, or whoever procures such a document for use or uses it as genuine, shall be punished by imprisonment not exceeding three years. Pursuant to paragraph 2 whoever misleads another as to the contents of a document and the latter signs this document believing that he or she is putting his or her signature to some other document or other contents shall be punished by imprisonment not exceeding three years. Paragraph 3 provides for special protection of public document, bill of exchange, cheque, payment card or public or official records and whoever commits the criminal offence referred to in paragraph 1 or 2 with respect to the aforementioned documents shall be punished by imprisonment from six months to five years (Criminal Code of the Republic of Croatia). The Criminal Code of Bosnia and Herzegovina in Article 257 provides for the incrimination of the offence of counterfeiting of credit and other non-cash payment cards. The offence is classified in the group of the offences against economy, trade and security of payment systems. Paragraph 1 provides for the basic form, thus whoever, with an aim of using it as genuine, makes a false credit card or some other card for non-cash payment, or whoever alters such genuine card, or whoever uses such false card as a genuine one shall be punished by imprisonment not exceeding three years. Paragraph 2 provides for an aggravated form of the offence when material gain is acquired by committing the offence referred to in paragraph 1 and the perpetrator shall be punished by imprisonment not exceeding five years. Paragraph 3 provides for an aggravated form of the offence when a material gain exceeding 10,000.00 KM is acquired. In this case the perpetrator shall be punished by imprisonment for a term between one and eight years. Paragraph 4 provides for the most aggravated form of the offence of counterfeiting of credit and other non-cash payment cards when a material gain exceeding 50,000.00 KM is acquired. Punishment for this form of the offence is imprisonment for a term between two and ten years. Paragraph 5 provides for false credit cards and other cards for non-cash payment to be forfeited (Criminal Code of the Federation of Bosnia and Herzegovina).

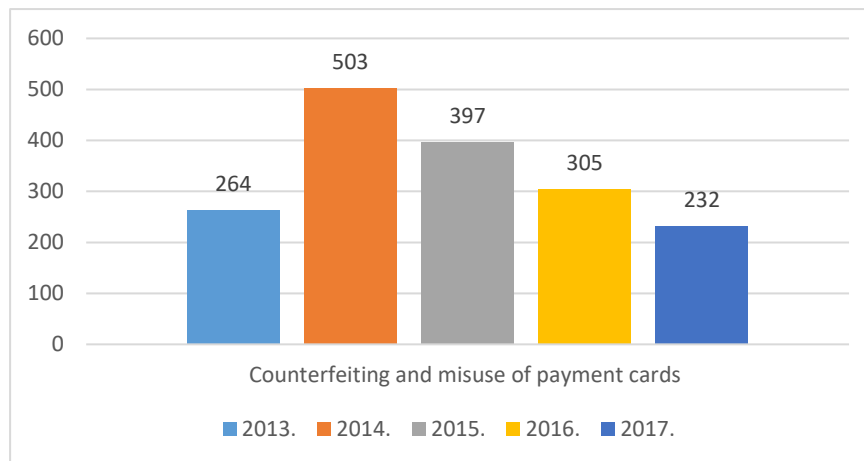
#### **4. RESULTS OF THE EMPIRICAL RESEARCH ON THE OFFENCE OF COUNTERFEITING AND MISUSE OF PAYMENT CARDS**

The empirical section of the paper analyses the criminal offence of counterfeiting and misuse of payment cards from the aspect of their frequency on the territory of the Republic of Serbia in a five-year period (2013-2017). The analysis in the observed period encompasses the number of registered, indicted and sentenced persons for this criminal offence, as well as the value and structure of crime loss<sup>1</sup>. As required by criminal proceedings, the starting point should be the number of registered, adult offenders.

*Figure following on the next page*

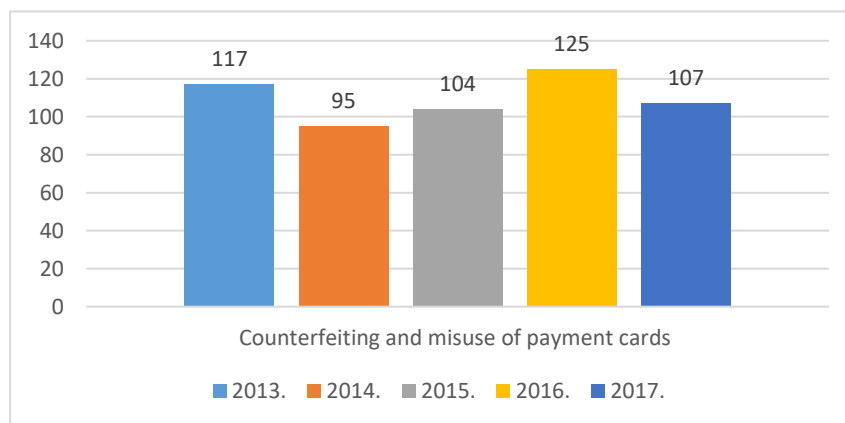
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<sup>1</sup> Difference between the number of registered, indicted and sentenced offenders, TN



*Figure 1: The number of offenders registered for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

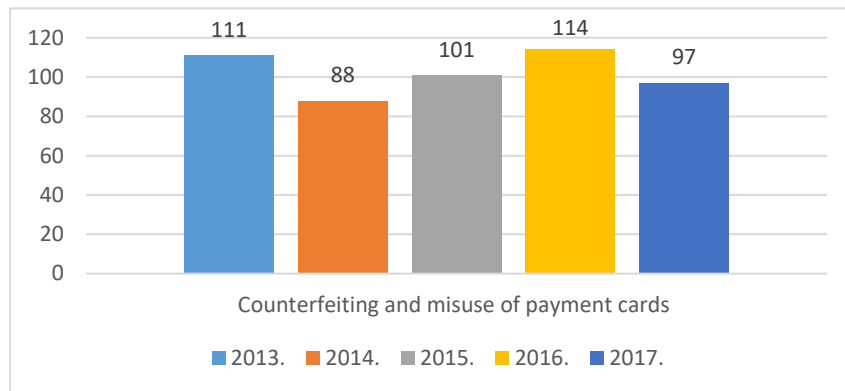
The biggest number of persons suspected for having committed the offence of counterfeiting and misuse of payment cards was registered in 2014, i.e. 503 persons. Approximately the same number of persons was registered for having committed this criminal offence in 2015 and 2016 (about 350), while in 2017 and 2013 around 250 perpetrators of this offence were registered. Given the observed period and stated data it can be concluded that, on average, annually, 340 adult persons are charged with this offence. The share of the criminal offence set forth in Article 234 of the Criminal Code of the Republic of Serbia in the overall number of registered criminal offences against economy (to which it belongs according to systematization and the object of protection) in 2013 was 12%, in 2014 was 15%, 12% in 2015, 19% in the year after, and 8% in the last observed year, 2017. Figure 2 shows the number of persons indicted for the criminal offence of counterfeiting and misuse of payment cards.



*Figure 2: The number of offenders indicted for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

After registration, the next stage in criminal proceedings is the stage of filing indictment provided that all formal i.e. procedural requirements have been met. On average, indictments for the criminal offence of counterfeiting and misuse of payment cards are filed against 110 adults per year, and the biggest number of indicted offenders in the observed five-year period was in 2016. There were slightly less indicted in 2013, while indictments were filed against almost the same number of offenders in 2015 and 2017. A fall in the number of indicted offenders is noticeable in 2014. It is the only year in the analysed period with less than 100 indictments filed.

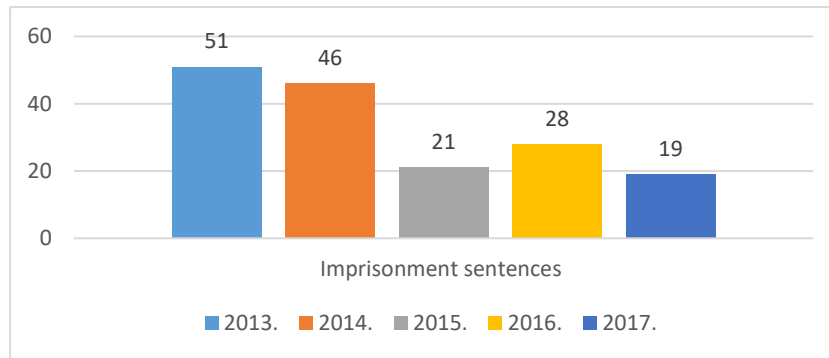
If this criminal offence is analysed within the group of criminal offences to which it belongs according to the object of protection in the overall criminal law system, it can be concluded that the share of these offences in the total number of indicted persons in 2013 was 5%, in 2014 it was 4%, in 2015 it was 4%, in the following year 5%, and in 2017 it was 5%. In order to have a full picture on the state of this criminal offence against economy in the Republic of Serbia, this occurrence, detrimental to every society, was analysed until the end. Figure 3 provides the facts on the number of persons sentenced for this offence in the observed five-year period.



*Figure 3: The number of offenders sentenced for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

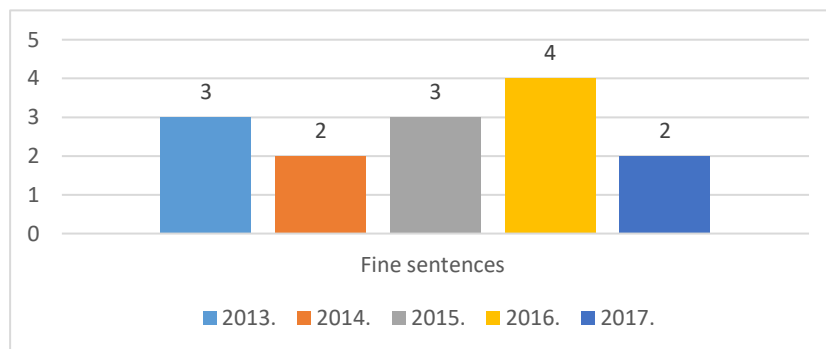
The research has shown a disproportion between the numbers of registered, indicted and sentenced offenders for the offence of counterfeiting and misuse of payment cards in the former five years, which indicates to a rather mild penal policy for these offences, and badly conducted investigation and badly formulated indictments. The smallest number of sentenced offenders for the analysed offence was in 2014, than in 2017, while the biggest number of sentenced offenders for this offence was achieved in 2016. We can notice almost the same number of sentenced offenders in 2013, in the first year of the observed period, and in 2015. It can be concluded than on average, every year, 102 offenders are sentenced for the criminal offence set forth in Article 243. The share of this offence of counterfeiting and misuse of payment cards in the overall number of sentenced offences against economy, to which this offence belongs, was 10% in 2013, 6% in 2014 and 2015, 7% in 2016 and 2017. In order to gain a full insight into the criminal offence of counterfeiting and misuse of payment cards it is necessary to view its penal policy. Namely, types of the offence and how criminal sanctions can be imposed for this offence have already been explained in the paper, but in the following part of the text the imposed criminal sanctions are analysed in the observed five-year period. Figure 4 shows how frequently the analysed offence is sentenced by imprisonment in the observed five-year period, Figure 5 presents pronounced fines, while Figure 6 shows the frequency of suspended sentence.

*Figure following on the next page*



*Figure 4: The number of pronounced imprisonment sentences for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

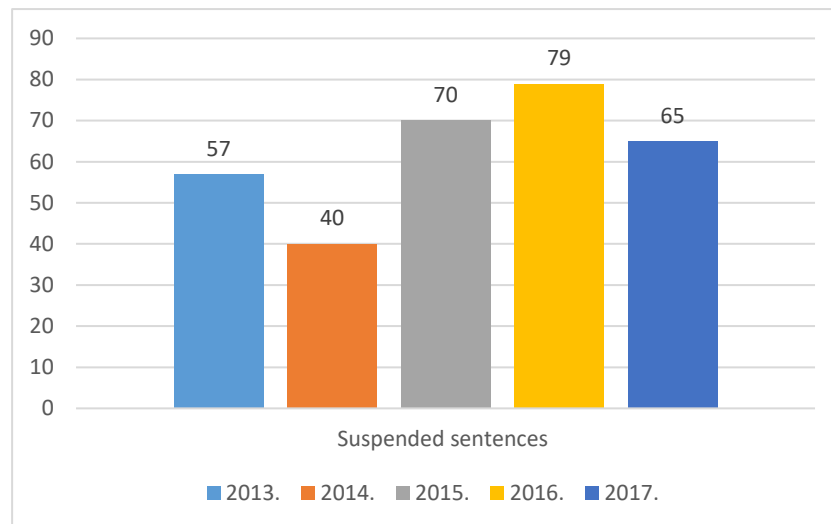
On average, annually, the criminal offence of counterfeiting and misuse of payment cards is sentenced by 33 imprisonments. The biggest number of imprisonment sentences was pronounced in the first analysed year, while the smallest number was pronounced in the last analysed year. However, it should be noticed that this average was not exceeded only in 2013, but this also happened in the year after, i.e. in 2014. It should be also pointed out that all the imposed imprisonment sentences were short-term detentions, and every year most pronounced imprisonment sentences were for the term from 6 to 12 month. The only exception was 2017 when most pronounced imprisonment sentences were for the term from 1 to 2 years.



*Figure 5: The number of pronounced fine sentences for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

When analysing fines it can be noticed that rather small number of fines is passed against this criminal offence. Annual average of the observed period is about 3 fines. It should be stressed that almost all or 95% of fines pronounced for this offence ranged from RSD 10000 to RSD 100000.

*Figure following on the next page*



*Figure 6: The number of pronounced suspended sentences for counterfeiting and misuse of payment cards on the territory of the Republic of Serbia by years*

This criminal offence follows suit with suspended sentence as the sanction most often pronounced. Annually, judges in the Republic of Serbia pass about 62 suspended sentences for the criminal offence of counterfeiting and misuse of payment cards. This is the best evidence of mild penal policy, but also of indecisiveness and insecurity of or judges.

## 5. CONCLUSIONS

Payment cards and their advantages are easily noticed in everyday life for more than 70 years. Modern way of living and payment transfers in contemporary society cannot be imagined without usage of these tiny plastic “wonder-workers”. Due to increased amount of obligations people cannot go from one bank counter to another, from one shop to another, but they are forced to use payment cards when making purchase and payments. Payment cards for online payment have been increasingly used, since purchases are not made only within boundaries of one state, but between several states, and not only states but also between continents. This payment instrument also has adopted the role of a credit instrument enabling people to buy certain products and pay in the forthcoming period, with or with no interest charged. This feature of payment cards means a lot to people who live in countries whose economy and finances are not really thriving such as ours. On the basis of the analysis of the criminal law framework for counterfeiting and misuse of payment cards both in the Republic of Serbia and neighbouring countries (Croatia, Macedonia, Bosnia and Herzegovina, Montenegro), it can be concluded there is an adequate legal framework. However, effective protection and suppression of this kind of criminal activity requires not only a well-regulated criminal law framework, but primarily raising cardholders’ awareness about certain ways of protection, and on the other hand working on education of law enforcement and legislative bodies, since it is a specific kind of crime which requires different technical and technological knowledge. In addition, it is necessary to raise public awareness about not only advantages but also threats of payment cards. Keeping information about payment cards secret is very important. For example, more often than not people carry security codes of payment cards together with the payment cards, thus those who come into possession of those cards may misuse them quite easily. Another issue that emerges is how banks indemnify their customers in case of misuse of cards. This issue has not been resolved in the best way, i.e. it is not resolved completely in accordance with positive legal legislation of the Republic of Serbia, i.e. Law on Contracts and Torts. Cardholders in this relation are usually in a subordinate position and are not able to settle their claims. This issue requires deeper analysis which has not been provided by this paper because it is more a subject

matter of civil law than criminal law. There is an inconsistency in the Criminal Code of the Republic of Serbia with regard to this offence and the offence of forging money. As a matter of fact the difference is in the prescribed punishment. In a situation when a perpetrator has acquired unlawful material gain exceeding a million and five hundred dinars by use of a payment card he will be punished by imprisonment for the term from two to twelve years, while a person who has acquired the same gain exceeding a million and five hundred dinars by forging money will be punished by imprisonment for the term from five to fifteen years. The same situation is found with procuring, acquiring and giving to another to use means for counterfeiting, wherein higher punishment is prescribed for procuring, acquiring and giving to another to use means for counterfeiting money than for procuring, acquiring and giving to another to use means for counterfeiting payment cards. The intention of the legislator remains unclear when it comes to the way of sanctioning these two criminal offences, since today the use of ready cash is almost the same, if not less, as the use of payment cards. Finally, let us glance back at the empirical part of the paper. In the observed five-year period on annual average 340 offenders are registered for this offence. Thus, almost every day one person gets registered for commission of this criminal offence. On annual average 110 adults are indicted for the offence of counterfeiting and misuse of payment cards, while the number of sentenced offenders on annual average is 102, which is less than a third of registered offenders. By simple observation of the given data it can be concluded that in case of the criminal offence of counterfeiting and misuse of payment cards there is a huge crime loss on the territory of the Republic of Serbia.

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## ANALYSIS OF MEDIA DISCOURSE ON MIGRATION IN FACEBOOK POSTS BY SELECTED SLOVAK PERIODICALS

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### ABSTRACT

*The presented study deals with the analysis of media discourse on the topic of migration in the posts and article headlines published on the official Facebook profiles of selected Slovak periodicals. The dominant media discourse we identified in the most read mainstream and tabloid periodicals in 2018 is a »migration management« associated with the qualitative analysis of the concrete problem and solution attributes. The alternative discourses identified in study are national issues, security risk and humanitarian issues. The humanitarian issues were mostly present in tabloid media. The shift to negative discourse is more pronounced in both media types.*

**Keywords:** *discourse analysis, Facebook posts and article headlines, migration, Slovak periodicals*

### 1. INTRODUCTION

International migration has long been an important social phenomenon, and it is an integral part of the globalization processes. Lidák associates these with the social, technological, information and communication development (Lidák, 2008), acting as a stimulating factor. At the same time, it is necessary to point out the persistent or growing differences between the cultures, particularly in the case of western and eastern world. As a result of the increasing international migration, Europe has become a mosaic of diverse cultures, however, with an impact on the economic, social, population, cultural, political, safety and environmental environment (Bargerová, 2016). IOM defines this fundamental problem of the 21st century as the movement of person or group of persons from one geographical unit to another by crossing the administrative or political borders in order to permanently or temporarily settle at a place other than the country of origin of these persons (IOM, 2003). The years 2015 and 2016 were the key years in the European migration crisis, with an unprecedented influx of refugees and migrants across the European borders. According to the European Commission data, a significant portion of migrants are fleeing the war and terror in Syria and the neighboring countries. This issue was addressed primarily at the level of the European Union, which has adopted several measures, ranging from the conflict resolution in the countries of origin, to addressing the root causes of migration and migration crises, increasing humanitarian aid, relocating the asylum seekers, resettling the people in need from the neighboring countries and ensuring a safe return of the persons who did not meet the asylum conditions, to actively

protecting the EU border, combating smuggling or forming new and safer routes for legal entry into the EU (Directorate-General for Communication (European Commission, 2017)). The media system and/or the individual media, acting both at the EU and national level, play an important role in the individual solutions but also in the integration of the people into the European culture and society. Based on the current focus in the research project VEGA 1/0192/18 titled "Shaping the attitudes of Generation Y in the V4 geographical area to the issue of migrants through digital communication on social networks", we focus primarily on the identification of discourse connected to this issue in the context of Slovak media, namely their official profiles on Facebook. We chose six representatives of tabloid and mainstream platforms, which are further described in the Methodology section. As mentioned by Spálová and Szabo (2018), "...we can consider the discourse on the migrants disseminated by the media to be essential for the creation of implicit attitudes towards them in the general public, with particular regard to the social groups subject to increasing manipulation (adolescents, seniors, groups with lower education, etc.). " Thus, the media are involved in the design and dissemination of discourse and shaping of social reality. The media in fact only represent the reality, but they also co-create it (Jirák and Kopplová, 2009). The formation of attitudes and public opinion on the issue of integration of migrants and refugees into the society can be affected by a variety of media resources. This process is associated with the so-called framing, which became the basis of several academic reflections on the European migration crisis (Cacciatore, M.A.; Scheufele, D.A.; Lyengar, S) (Greussing, 2017), (Krotofil, and others, 2018) (Sajir, a iní, 2019), (Spálová, Szabo, 2018), (Spálová Szabo, 2017), (Štrbová, Púchovská, 2018), (Spálová, Scianska, Szabóová, 2018) and others). Cacciatore, Scheufele a Lyengar (2016) stress that media framing is linked with a number of other conceptual models such as priming, agenda setting, persuasion, schematic interpretations and scripts. Kahneman and Tversky specify the psychologically supported framing focused on the variation of HOW the given information is presented to the audience, and they background the content itself, i.e. WHAT is being communicated (Kahneman and others, 1979). In the case of social perspective, Cacciatore, Scheufele and Lyengar emphasize Goffman's (Goffman, 1974) approach, who understands framing as a method to use the interpretative schemata for the classification and interpretation of the information the people encounter in their daily lives. The frameworks presented by the media, according to Gamson and Modigliani (Gamson et al., 1989), are the central organizational ideas providing the meaning to the events and situations, while at the same time they present controversy, and thus the essence of the given problem. In matters of the refugee/migration crisis, Greussing and Boomgarden connect the theory of framing with the narrative of the crisis, the impact of the media and support for specific interpretative perspectives. Often, certain selected aspects of the given area can be highlighted, while other facts may be subsequently overlooked. At the same time, it is necessary to consider the format, nature and the entire positioning of the medium, which are connected with the so-called internal logic, leading to the differences in the tone and content presented (Brüggemann, 2014). This fact is also confirmed in earlier research by Gabrielatos and Baker, who verified the tendency of tabloids (in opposition to serious press) to provide a one-sided negative framing of the migration issue in the UK (Gabrielatos et al., 2008). Undoubtedly, the media-driven discourse has a significant impact on the problems of migrants, their perception and evaluation by the receiving end of the media content. Goodman et. al (Goodman, Simon; Sirriyeh, Ala; McMahon, Simon, 2017) emphasize the role of the media in creating the social structures, categorization associated with the so-called labeling, and ultimately in the formation of discourse defined by the attributed qualitative specifics and contextual characteristics (McMahon, 2015). Media discourse is shaping the public opinion, it activates and positions political mobilization and legal aid by providing specific interpretive perspectives, in which offers a cognitive shortcut for the recipients of media content (Greussing and H.G.

Boomgaarden). The basic publicly available perspective is shaped on the backdrop of the media coverage of the refugee crisis. In 2015, i.e. at the time of the strongest migration waves and refugee flows into the EU, Greussing and Boomgaarden made a summary of the current frameworks connected with this issue in the context of mainstream and tabloid press in Austria. Two framework formulas prevailed:

1. humanitarian issues (assistance to people, welcoming of the refugees, hard journey of the refugees/migrants, desperation, need for shelter, aid, refugees as a productive element in society)
2. security issues (refugees as a threat, ISIS, Muslim invasion, threat to national identity, economic threats, criminals, terrorists, refugees should remain in their own country, hostility of Islam, support for Trump's attitude).

In view of the dominance of discourse and/or the identified themes and their labeling, significant differences were associated mainly with the framework of crime, which was prominently displayed especially in the tabloids. It should be noted that the authors identified a number of framework formulas, but these were distilled into border control and financial management of the situation and the related costs (Greussing, 2017). The presence of these frameworks is also reflected in the subsequent analysis by Lee and Nerghes (2018) and Vlaicu and Bălăuță (2017). Similar results were also presented in the study by Vlaicu and Bălăuță (Luiza VLAICU, 2017), which highlighted the important position of categorization in the context of terrorism, crime, sexual violence, disease, intention to endanger national/European security, prosperity of civilization, and many other topics of a significantly negative nature. The above humanitarian and security framework was also confirmed in the study by Tkaczyk (Tkaczyk, 2017), analyzing the Czech media environment, which also highlights the presence of a political framework. The author provides 3 categories of discourse, which are divided into problems or solutions:

- Humanitarian framework
  - Problem definition = tragedy, humanitarian issues or crisis, individual disaster
  - Recommended solutions = immediate assistance, support for the Middle East
- Political framework
  - Problem definition = administrative issues, protests and demonstrations
  - Recommended solutions = redistribution quotas, political changes, integration programs
- Security framework
  - Problem definition = security threat and risk, crime and lawlessness, "unrest"
  - Recommended solutions = border control, construction of protective walls, migrant detention, involvement of military forces, fighting against migrant 'smugglers'

Spálová and Szabo (2018) analyzed the discourse in the Slovak and Czech periodicals, and stressed that the issue of "securitization of migrants" was voiced by the government in the years 2015-2016. The image of the refugees and migrants presented by the politicians and media may have a significant impact on their perception by the general public and the attitudes to this issue. As early as in 2017, L. Spálová and P. Szabo revealed the shift in the Slovak political and media discourse from addressing the issue of the so-called "cultural threats" and "security risks" towards the so-called "management of migration" (Spálová, Szabo, 2017 in Spálová, Szabo, 2018).

## 2. METHODOLOGY

Following the conclusions of the aforementioned research studies, which deal with the issues of social and political impacts of migration and refugees in the local and international context, we formulated our own research problem: an analysis of the media discourse disseminated

through selected Slovak tabloid and mainstream media in their official profiles on Facebook in 2018. To solve this problem, it is necessary to answer the following research questions:

- RQ1: What dominant media discourse (and its alternatives) was used in 2018 in connection with migration and refugees on Facebook in the selected Slovak tabloid and mainstream media?
- RQ2: What attributes does the media discourse have in terms of defining the problem and providing the solutions?
- RQ3: Is there a shift in the media discourse compared to the previous periods, namely the years 2015 to 2017?

## 2.1. Research method and research plan

In order to resolve the research problems and find the answers to the research questions, we chose a qualitative-quantitative, i.e. mixed, methodological approach. We used the content analysis and discourse analysis method. Content analysis is a special research method designed to analyze text documents (in our case, the posts and headlines published by selected online information platforms on Facebook in 2018), which we used to further analyze the content through quantitative expression of frequencies and count (posts and article headlines in the internal editorial text of the dailies, or journalistic interpretations in the comments), as well as the qualitative analysis and interpretation of the selected research material. The presence and incidence of the keywords "migration", "migrants", "migration", "refugees", "refugee" and their derived (inflected) forms was used as a selection criterion for the monitored units. In the search for answers to the formulated research questions, we followed the following analytical categories and subcategories:

- Type of prevailing discourse (management of migration, national issues, security risks, humanitarian issues),
- Attribute of the prevailing discourse (problem definition and recommended solutions),
- Article/post source (internal and external),
- Dominant media discourses from 2015 to 2018.

The research material consisted of the media texts published in the period from 1.1. 2018 to 31.12. 2018 on Facebook on the official profiles of the most popular Slovak online news platforms. We divided them into two subtypes, mainstream (Sme, Denník N, Aktuality) and tabloid (Nový čas, Plus JEDEN DEŇ, Topky). The extent of readership and/or audience on Facebook was used as the media selection criterion, and we focused on the ones with the highest readership.

*Table 1: Overview of the most read periodicals by the number of followers on Facebook as at 08.03.2019 (custom processing)*

Mainstream media		Tabloid media	
Name of periodical	Number of followers	Name of periodical	Number of followers
SME	135,458	Nový Čas	451,750
Denník N	134,065	Plus JEDEN DEŇ	127,981
Aktuality	240,668	Topky	364,728
<b>Average</b>	170,064	<b>Average</b>	314,819

The quantification procedures implemented in the content analysis of text were the following:

1. Frequency of occurrence of the analyzed category (relative count) - *discourse, posts per month*
2. Dichotomy - presence and/or absence of indicator - *type of discourse* (Švec, 1998).

We analyzed the media texts on migration and refugees with the help of discourse analysis, a theoretical and methodological concept introduced by N. Fairclough (Fairclough 2003) who describes the so-called three dimensional approach. In his view, discourse forms the statements, establishes the relationship between the speakers and affects the formation of life in the society. In the analysis, we applied the qualitative research strategy, which we used to identify the discursive strategies linked to the topic of migration and refugees. The discourse categories were taken from previous research studies (See Introduction).

### 3. ANALYSIS

#### 3.1. Quantitative analysis

In 2018, we identified 190 posts focusing on migration and refugees on the Facebook profiles of selected Slovak online information platforms in the context of European migration crisis. Altogether 106 (55.8%) came from the tabloids and the remaining 84 were published by mainstream media (Chart 1; Table 2).

*Chart 1: Ratio of Facebook posts by mainstream and tabloid media in 2018 (custom processing)*



The mainstream media publish their posts with an average frequency of 2 posts per month, while the tabloid media published their Facebook profile posts on this subject a little more often with an average monthly frequency of 3 posts per month (Table 2).

*Table 2: Total number of posts published in 2018 and their average monthly rate on Facebook (custom processing)*

Media type	Number of posts in 2018	Average number of posts per month
Mainstream	84	2
Tabloid	106	3

All published posts contained links to authorial articles, which were of an internal nature in 99% of the cases in both media types. After analyzing the frequency of posts, we further investigated the predominant media discourse in the analyzed units and its alternatives.

*Chart following on the next page*

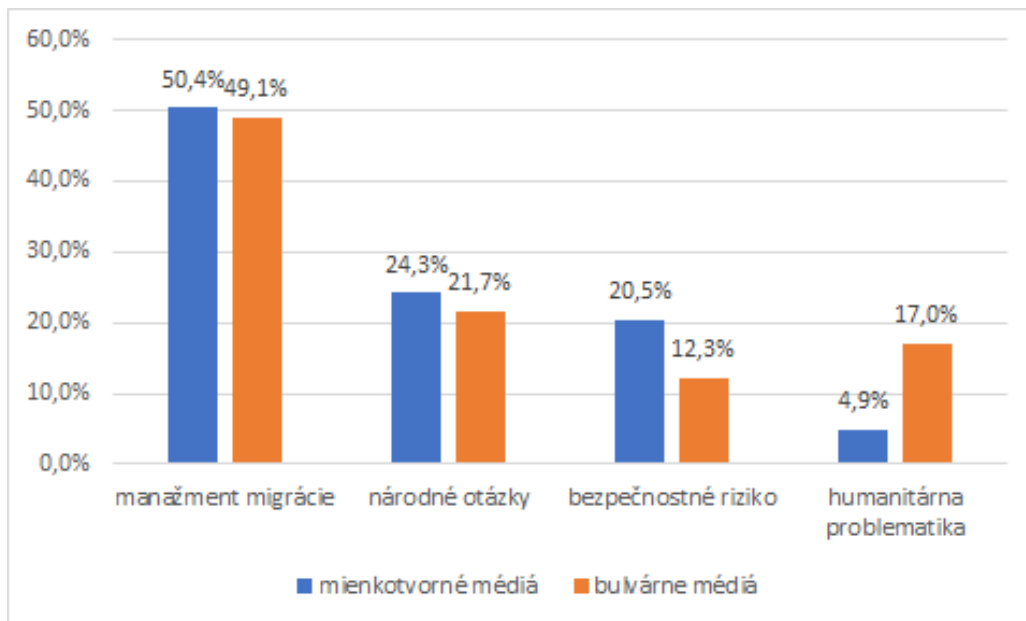


Chart 2: Analysis of media discourses presented by the tabloid and mainstream media on Facebook (custom processing)

We found that “management of migration” (Chart 2) is the dominant discourse on Facebook in the Slovak media space. It comprises more than a half (50.4%) of all the analyzed mainstream media news and almost half (49.1%) of the discourse in the tabloid media news. In both types of dailies, the migration issues are largely framed as a security risk (20.5% in the mainstream media, 12.3% in the tabloid media) and national issues (24.3% in the mainstream media; 21.7% in the tabloid media). However, a difference in the represented discourses could be noted in the case of humanitarian issues. While in the mainstream media this discourse was represented only by 5%, humanitarian issues represented 17% of the discourse in the tabloid dailies.

### 3.2. Qualitative analysis

While it may seem that the issue of migration and refugee crisis in Europe is on a decline, it is not quite the case. Three years have passed since the most significant migration wave, which caused a broad political and media dialog, with a number of possible solutions and approaches to the issue introduced with a political, economic, humanitarian or legislative undertone (Štrbová, Púchovská, 2018; Spálová, Szabo, 2018; Chudžíková, 2016; Žúborová, Borárosová, 2016 and others). The media themselves play an important role in addressing this issue and integration of the migrants into the society and culture. By analyzing the Facebook pages of the selected representatives of online information platforms, we defined 4 discourses and their attributes in the context of the previously identified discourses and their extension in relation to the current situation. The main identified discourses are “management of migration”, “humanitarian issues”, “security risks” and “national issues”. Each main discourse was depicted and portrayed by two categories of potential attributes, i.e. problem definition and recommended solutions. In terms of frequency, the main discourse of migration management is foregrounded irrespective of the significant differences in its occurrence depending on the media type (see Chart 6). In the case of dominant main discourse, we categorized the problem definition by reference to the political implications, administrative issues, protests and demonstrations. The second category of attributes for migration management consisted of the recommended solutions of this issue on the basis of a specific political solution, migration pact, cooperation between the countries, as well as countries of origin of conflict, management of the situation in Syria etc.

In some cases, we noted a predominance of one category of attributes, but there were also cases when an attribute was causally associated with a secondary attribute. For example, a representative of the online tabloid platform Topky.sk published a post with the text According to some, the anti-immigration decree will only cause more problems on December 16, 2018. This post linked to an article titled Thousands of people protested in the streets of Rome: The new anti-immigration law is an eyesore. In the case of the very discourse, the protest against migratory law, i.e. the proposed political solution to the crisis. The negative economic consequences were again presented in a causal relation to the fundamental political solution – redistribution of migrants – which has this time taken the position of a primary attribute. A post with the text The system of compulsory redistribution of migrants in the EU will not be implemented yet. Merkel had to retreat. For the V4 countries, it is a Pyrrhic victory, though, writes Zolo Mikeš. This post linked to an article bearing the headline Zolo Mikeš Commentary: Refusing refugees will cost us money and prestige and it was published on the aktuality.sk Facebook page on February 7, 2018. In this case, the dominant attribute was the political solution itself, with potential economic consequences. The second most important discourse was represented by national issues where the attribute was perceived along the lines of the defined problem and the solutions presenting an accepting, rejecting or neutral attitude, and mostly on the domestic or foreign national level. This discourse was again almost equally represented in the communication of tabloid and mainstream information portals. The attributes of the defined problem in the national issues were, for example, the fear of the indigenous population of the migrants/refugees, the phenomena causing disruptions on the national (domestic) political scene, rejection of the migrants by the local population and others. For example, the denník N portal published a post with the text Smer partly shuns the issue and no longer fuels it from a certain moment. “The people still live in fear of the refugees in some forms. The issue is who and how discusses the topic,” says sociologist Martin Slosiarik. This post linked to an article with the headline Why have the migrants become a thing again in Czechia but not in our country. The same portal published a post with the text Two weeks before the election, migration is the main topic despite the fact that less and less migrants come to Europe. The number of people illegally entering the EU fell by 60 percent last year on February 24, 2018. The detailed information and specification of the stakeholder associated with this attribute is provided in the headline Migrants are a big issue before the elections in Italy – the right wants to deport them all. The solutions of migration on the national (international) level have become a primary and framework attribute. The issue of fear of migrants is implicitly linked with the post on the topky.sk Facebook page The refugee crisis is far from over, which complements the article titled Montenegro is considering a fence on the border with Albania – with migrants as the reason. In this case, the discourse framework of the national issues is met by the problem definition, which is the very crisis and migrants, and its subsequent solution by the given country (Albania) - the erection of a protective fence, which unequivocally shows a rejecting position. Again, it is important to highlight the different levels of language in the tabloid and mainstream media (differences in form, content and extent of the information). In the tabloid media, we can expect a higher tendency to manipulation by deliberate selection and highlighting, or vice versa, concealment and marginalization of information or data. This may result in a distorted image of these issues created by the media and a distorted attitude of the audience and/or general public to the issue of migration and the refugee crisis. These aspects can be explained on the background of the “click bait” phenomenon, with sensational headlines used as bait to attract and win the reader (Nutil, 2018). It is interesting that in the case of main discourse categorized as security risk, we noted a significant discrepancy between its frequency of occurrence depending on the type of medium, and its significant presence in the mainstream media. Even in this case it is necessary to operationalize the basic frameworks and/or specific attributes constructing the given discourse.

If the discourse is defined in the context of an explicitly-defined problem, we noted the attributes such as prospects of migrants as a threat, migrants and refugees as criminals, nonconformist population groups, rapists, migrants as a health threat and others. The creation of a special prison or deportation to a deserted island were the attributes of a solution of an explicitly or implicitly stated problem. For example, on February 9, 2018, pluska.sk published a post on its Facebook page titled We know the sentence for the migrants who horribly raped women in Italy!, which complements the headline Young migrants who beastly raped a tourist, appeared in court: and they consider this RIDICULOUS sentence to be harsh? The violent actions of migrants or refugees become the identified problem, and the actual solution of this problem is defined rather implicitly by reference to the sentence. The perception of migrants as a health threat is also an attribute defining the problem. A post with this attribute was published by Pluska (October 1, 2018) - It spreads throughout Europe... and the problem itself is defined by the headline Another case of the dangerous infection has been confirmed in the Czech Republic: We finally know whether it is caused by migrants! This example illustrates the transformation in the security discourse, with emphasis on the adverse impacts of immigration on health and living conditions of the indigenous population in the country. A typical example of the attribute associated with the solution to this threat is the post by denník N dated December 7, 2019 - It will not be a prison. The migrants will not be banned from rafting ashore. However, they always have to return to the island for the night, or face jail, which links to an article titled The Danish will send the sentenced migrants to a deserted island. This example is a typical attribute associated with the solution of the problem within the discourse depicting the migrants as a security risk. The last discourse type covers the humanitarian issues associated with the refugee crisis. Particularly surprising is the considerably significant presence of this issue in the tabloid media. As was the case in the previous major discourses, even here the analysis occurs on the backdrop of the attributes associated with the problem definition (dangerous journey of the migrants, need for help from the people, need for solidarity, pitfalls and obstacles lurking on the migrants and others), as well as the recommended solutions to this specific problem (support for humanizing rhetoric, help for the migrants, aid in the camps and others). Within this discourse we underline the increased incidence of the attribute connected the problem definition compared to the actual solutions. An illustrative example is the post by topky.sk Lebanon, with only four million citizens, has accepted almost a million Syrian refugees on its territory since the outbreak of the conflict in Syria (January 20, 2018), which was accompanied by the headline The refugees did not make it across the mountain border crossing: 15 frozen bodies, including children. In terms of the stakeholder's origin, this attribute can be classed into the foreign national category, which can be seen as an implicit initiator of the need for a humanitarian solution to this problem. In connection with the specifics of the present discourse in the mainstream and tabloid media, it is necessary to emphasize the difference in the choice of vocabulary, syntax use, structure, and the actual frequency of publishing the posts to the issue of migration and refugee crisis in Europe. The tabloid media publish more often on this subject (see Table 2), however, the published information often lacks and/or has no identification of the originator or entity associated with the given statement or situation. In the case of mainstream media, the discourse itself may be largely connected to a particular political leader, economic or legal entity, organization or other entity, such as a political or media analyst (e.g. UN, Angela Merkel, EU, IOM, Zolo Mikeš, etc.). Apart from the fact that the tabloid media publish more often on this topic on Facebook, which was also reflected in a higher average rate of posts, they also have a higher number of followers on the social network (See Table 1). It follows from the above that the tabloid media can potentially affect Slovak users on Facebook to a greater extent compared to the mainstream media. The method of framing the migrants and refugees into the present discourse can therefore be more significant in shaping

the subsequent attitudes of the readers to the subject in the case of tabloid media because of their greater impact and information force.

*Table 3: Media discourses and their attributes in the selected Slovak online information platforms in 2018 (custom processing)*

DISCOURSE	DISCOURSE ATTRIBUTE	
	PROBLEM	SOLUTION
Migration management (dominant)	Political consequences - crisis in the EU, threat to Schengen, disputes over quotas, inactivity/lack of interest to solve the issues, administrative issues, protests, demonstrations, tightening legislation (e.g. for non-profit organizations), illegal smuggling, refugee starvation tactics	Political solutions (migration pact, cooperation between countries, cooperation with the countries of origin of the conflict), management of the situation in Syria, migration quotas, a new system of screening the immigrants, deportation of migrants, migrants as a new labor force (economic growth), temporary admission of refugees, integration community centers, reception centers for migrants (EU), migration as a factor in the allocation of EU funds
National issues (1st alternative)	Fear of migrants/refugees, hatred of Muslim migrants, disruption in the political arena, panic and fear by the politicians, abuse of the migration topic (populism), rejection by the local population, crisis, preferential treatment of refugees, tensions, increased number of migrants (migration wave, inflow)	Border protection (e.g. erection of a fence, barbed wire), increased border control, stricter criteria for the admission of migrants
Security risk (2nd alternative)	Migrants as a threat, criminals, rapists, enemies, nonconformist groups, health threat, discontent of migrants in the host country, rebellion and blockade of roads by migrants, espionage, hoaxes, resentment against migrants	Special prisons or deportation to a deserted island, conviction of criminals
Humanitarian issues (3rd alternative)	Dangerous journey of migrants, need for help and solidarity, pitfalls and obstacles lurking on migrants, migrant death, violence against migrants, harsh treatment of migrants, closure/demolition of camps, climate migration	Support for humanizing rhetoric, help for migrants, aid in the camps, rescuing migrants at sea, support for migrant return to their homeland, NGO awards

Table 3 shows the identified media discourses by the rate of occurrence on the Facebook pages of selected Slovak tabloid and mainstream media, and it also clearly shows the signs of the said discourses in the two categories of attributes: problem definition and recommended solutions. Within the triangulation methodological approach from the analytical part, we first present the quantitative data, i.e. the proportional representation of discourse in the selected types of media, representation of the article sources (internal and external), frequency of posts on the subject of migration on Facebook and number of followers of the said media on Facebook. Subsequently, we conduct a qualitative analysis of the various discourses and their attributes, with concrete examples of posts and articles illustrating the problems and solutions.

#### 4. CONCLUSION

International migration is a phenomenon of global character and it plays a fundamental role in shaping the society, but the very society (its arrangement, evolution and progress) serves as a starting mechanism for migration. Thanks to this phenomenon, Europe is becoming a mosaic of cultures (Bargerová, 2016), but also an imaginary space of rivalry formed on the backdrop of xenophobia, racial intolerance, intercultural clashes and nationalism. This phenomenon has gained much traction with the political parties and NGOs, activists and academics who map the situation and bring answers to the continuously emerging issues. This problem is also extensively analyzed in the media and/or media systems of the countries concerned. The acceptance, or vice versa, rejection of the social changes, political or legislative measures, and the interaction between the stakeholders, is largely supported and accompanied by the media (Goodman, Simon; Sirriyeh, Ala; McMahon, Simon, 2017), which participate in the framing of the presented facts through the mediation process, forming the media reality (Jiráček, Kopplová, 2009). The media play an important role in the dissemination of information to all stakeholders. Sajir a Aouragh (2019) emphasize the ambivalent role of social media in the very issue of management of mobility of migrants. For this reason, it is important to perceive, analyze and critically cognitively process the content, images and ideas presented by the media. Through framing, the media label the events in the outside world, with the primary goal of facilitating the orientation of the recipient, but potentially with many other secondary implicit intentions. These intentions are unmasked in the critical reflection of the media representations. Numerous research activities have been conducted in this area since the culmination of the crisis. In the first phase in the years 2015 and 2016, the issue of migration was presented to the readers in the prevailing framework of security and humanitarian issues (Greussing, 2017). During this period, the potential panic from the crisis in Europe (Sajir, and others, 2019) became the central topic in the discourse, mainly due to the cultural discrepancies between the original and incoming population. Current research (Spálová, Szabo, 2017; Spálová, Szabo, 2018; Zágorská in Spálová, 2018), however, points to a shift in the discourse from the presentation of the problem (security or humanitarian) to seeking the solutions categorized as “management of migration”, with “politicization” (Tkaczyk, 2017) as a kind of intermediate step. In our research, we focused on mapping the specifics of the current discourse linked with the given issues in the context of the news messages published by the selected representatives of tabloid and mainstream media in their Facebook profiles. According to our findings, the Slovak media space shows a significant presence of four discursive frameworks - humanitarian issues/problems, national issues, security risks and management of migration, which reached a dominant and almost equal representation in both types of media. The research results open up other issues having to do with the perception of migration and refugees by the users of Facebook as an immediate audience for the posts. They equally point to the differences on the verbal and emotional plane of the tabloid and mainstream media. The differences on the compositional, language and visual plane of communication, as well as in the actual behavior and/or presented implicit or explicit response of the recipients of this information, appear in the forefront.

The correlation between the dominant discourse and manifested attitudes of the Slovak users to migration and/or identification of discourse with the most direct and explicit response from the recipients (likes, shares, comments) or a correlation analysis of the sentiment or attitude in discourse by the stakeholders and the attitudes presented in the comments by the users themselves, i.e. the readers and/or “followers” (using the parlance of social media), of the selected media representatives, may all become the subject and challenge of further research.

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## GENDER PAY GAP IN OECD COUNTRIES

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### **ABSTRACT**

*Organization for Economic Co-operation and Development (OECD) is an international organization that supports countries belonging to its structure in activities aimed at improving the standard of living of citizens not only in member countries, but also around the world ([www.oecd.org](http://www.oecd.org)). One of the factors that affect the lives of citizens is the level of their income, which should be adequate to the work performed. Therefore, the gender of the employee should not matter. The aim of the presented study is to analyse the occurrence of the gender pay gap in OECD countries and to verify whether pay inequalities are related to the economic growth of a given country. The structure of the paper is as follows. The first part presents the general characteristics of the 36 developed countries currently belonging to this international organization. Then, descriptive analyses of inequalities in wages were performed for men and women and GDP per capita in individual OECD countries. Five groups of countries were distinguished, namely Anglo-Saxon countries, Western European countries, Eastern Europe countries and Nordic countries. The remaining countries (Chile, Israel, Japan, South Korea, Mexico and Turkey) were qualified to the last group. The final part presents the results of statistical analysis of the relationship between the gender pay gap and gross domestic product per capita. The paper ends with a summary and conclusions from previous analyses. The applied research methods are literature review and data analysis made available by the Organization for Economic Co-operation and Development ([www.oecd.org](http://www.oecd.org)).*

**Keywords:** GDP per capita, gender pay gap, OECD

### **1. INTRODUCTION**

In the 1950s, Simon Kuznets, later Nobel laureate, presented his concept on the relationship between income inequalities and the economic growth of a given country (Kuznets, 1995, p. 21). In his work, he hypothesized that income inequalities in the initial phase of the economy growth of a given country are low, which is related to the demand only for simple jobs that do not require qualifications that anyone can do and – therefore – everyone receives the same payment for work. As the economy of a given country grows, the importance of agriculture decreases and the population has to move to cities in order to undertake paid employment. The combination of incomes of rural and urban population means that income disproportions will increase (Kuznets, 1995, p. 10). In the next stage of economic growth, the population coming from the village formed families in the city and became an urban population, which would make income disparities narrower (Kuznets, 1995, p. 20). The dependence presented by Kuznets can be represented by a curve in the shape of an inverted parabola. In later years, the theory presented by Kuznets was repeatedly analysed, although the author himself stressed that the study was largely based on speculation (Kuznets, 1995, p. 29; Fogel, 1987, p. 26). Lantican C.P., Gladwin Ch. H. and Seale J. L. in their study pointed out that gender inequality can move along the parallel trajectory as income inequality along the growth of the economy of a given country. In their study they indicated that the results of the tests carried out give some support for the application of the theory of Kuznets (Lantican, Gladwin, Seale, 1996, p. 24). In the study of Blau D. and Kahn M, focusing on the US economy in comparison with other highly developed economies, it was pointed out that greater income inequality results in a larger gender

gap (Blau, Kahn, 1996, p. 54). Analogical conclusions were drawn by Kidd M. and Shannon M. by analysing the pay gap in Australia and Canada (Kidd, Shannon, 1996, p. 730). Brainerd E., examining the selected economies of Eastern Europe and countries created as a result of the breakup of the Union of Soviet Socialist Republics, indicated that the reduction in the pay gap between women and men positively affects the long-term economic growth (Brainerd, 2000, p. 158). The inverted U-shaped relation between the share of women in the labour force and economic growth can also be found in the works of, among others, Pampel F., Kazuko T. (1986). The presented theory and subsequent studies give the basis for the hypothesis that there is a relationship between the gender pay gap and economic growth in OECD countries. And, hence, it can be expected that countries characterized by higher GDP *per capita* will also be characterized by lower values of the gender pay gap. The aim of the presented study is to identify the relationship between wage inequalities between women and men (expressed through the gender pay gap) and the growth of the economy (expressed by means of the gross domestic product per inhabitant) between individual countries belonging to the OECD. The study is divided into the following parts: the first part is devoted to the general characteristics of 36 democratic developed countries that are part of the OECD structure. The next two parts were devoted to descriptive analyses of the spatial differentiation of the gender-related pay gap and gross domestic product *per capita* in individual groups of countries. To this end, each country was assigned to one of the following groups: Anglo-Saxon countries, Western European countries, Eastern Europe countries and the Nordic countries. The remaining countries (Chile, Israel, Japan, South Korea, Mexico and Turkey) were qualified to the last group. In the final part, the results of the analysis verifying previously substituted hypothesis are presented. The analysis used data provided by the Organization for Economic Co-operation and Development from the period 1991-2016.

## 2. GENERAL CHARACTERISTICS OF DEVELOPED COUNTRIES BELONGING TO THE OECD

Organization for Economic Co-operation and Development is an international organization that currently consists of 36 highly developed countries. The original Member of this organization are: Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. These countries signed the Convention on the Organisation for Economic Co-operation and Development on 14<sup>th</sup> December 1960 (OECD, 2001). Subsequently, the following countries joined the organization: Japan (accession year 1964), Finland (1969), Australia (1971), New Zealand (1973), Mexico (1994), the Czech Republic (1995), Hungary (1996), Poland (1996), South Korea (1996), Slovakia (2000), Chile (2010), Slovenia (2010), Israel (2010), Estonia (2010), Latvia (2016) and Lithuania (2018) (<http://www.oecd.org/about/>; access: 19.02.2019). The main goal of this organization is to support the countries that are part of the organization in order to achieve an ever higher level of economic growth and improve the standard of living of citizens not only of the member states, but also all over the world (<http://www.oecd.org/about/>; access: 19.02.2019). For the purpose of a descriptive analysis of correlations between particular countries of the organization, five relatively homogeneous groups of countries were distinguished (according to Krajewska, Roszkowska, 2017, p. 182)<sup>1</sup>. These are:

- a) The Anglo-Saxon countries: Australia, Canada, Ireland, New Zealand, United Kingdom and the United States,
- b) Western Europe countries: Austria, Belgium, France, Germany, Greece, Italy, Luxemburg, the Netherlands, Portugal, Slovenia, Spain and Switzerland,

<sup>1</sup> Groups of countries can be divided in many ways, another proposal is, for example, the Ward method (see Domagała, 2016, p. 45).

- c) Eastern Europe countries: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia,
- d) The Nordic countries: Denmark, Finland, Iceland, Norway and Sweden,
- e) The remaining countries: Chile, Israel, Japan, South Korea, Mexico and Turkey.

All countries belonging to OECD are defined as developed, while they are characterized by regional diversity among themselves e.g. in terms of income per capita (Bassanini, Scarpetta, 2001; OECD, 2018, p. 74)

### 3. SPATIAL DIVERSIFICATION OF THE GENDER PAY GAP IN OECD

When analysing the quantitative data collected and made available by the OECD, it can be noticed that they are characterized by high heterogeneity of men's and women's remuneration in the countries belonging to the organization (Kunze, 2017, p. 26). The gender pay gap may depend on many factors. According to the theory of human capital, the distribution of income between individuals is affected by investments, among others, in education, gaining qualifications and experience (Schultz, 1961; Mincer, 1958; Becker, 1993). However, evidence shows that in developed countries where access to education is much easier, the pay gap is more related to the general structure of wages or occupational segregation (Plantenga, Remery, 2006, p. 26). The shaping of the level of the gender pay gap in groups of developed countries belonging to OECD is presented in chart 1<sup>2</sup>.

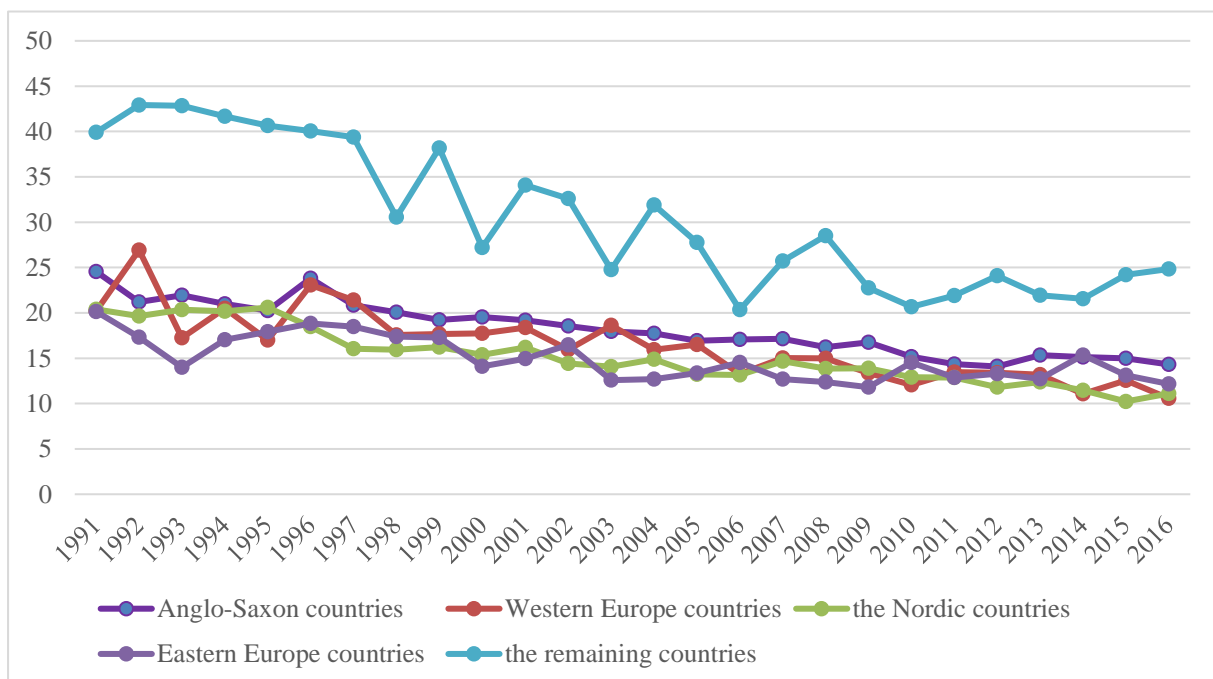


Chart 1: The level of the gender pay gap in groups of developed countries belonging to the OECD in 1991-2016. Own study based on <http://www.oecd.org/about/>; access: 22.02.2019

Several most important conclusions result from it. Countries in the remaining group (i.e. China, Israel, Japan, South Korea, Mexico and Turkey) were characterized by the highest rates of the gender pay gap in 1991-2016 (on average in this period, women earned around 29.78% less than men).

<sup>2</sup>According to the methodology proposed by the OECD, the gender pay gap is characterized by the difference between the median earning of men and women in relation to the median earnings of men. The data shared by the organization refer to the full-time employees and to self-employed persons (<http://oecd.org>, access: 21.03.2019).

Within this group, the highest average value was recorded in South Korea (40.67%), while the lowest in Turkey (4.40 %). None of the other groups in the entire analysed period achieved a comparable result to the groups of these countries. The Anglo-Saxon countries were characterized, on average, by the value of the gender pay gap above 20% (in the analysed period it was about 21.51%). The highest average values were observed in Great Britain (approx. 29.70%), while the smallest in New Zealand (10.74%). The remaining groups of countries were characterized by average values of the gender pay gap below 20%. (in Eastern Europe countries, the average value was around 14.77%, the highest value was recorded in Estonia (27.71%) and the lowest in Hungary (9.70%); in the Nordic countries, the average value was 15.68%, the highest value was recorded in Finland (21.74%) and the lowest in Denmark (8.66%); in Western Europe countries, the average value of the gender pay gap was 14.60 %, the highest value was recorded in Switzerland (21.08%), while the lowest in Luxemburg (7.69%). Analysing each country separately, it can be seen that both the highest average value of the gender pay gap (belonging to South Korea – 40.67%) and the lowest value (belonging to Turkey – 4.40%) are in the group of countries that have not been qualified to any of the other groups. Only 7 out of 36 analysed countries were characterized by the average single-digit value of the gender pay gap (Turkey, Slovenia, Luxembourg, Denmark, Norway, Belgium and Hungary), while 10 of the analysed highly developed OECD countries recorded the average value of the gender pay gap over 20% (Austria, Switzerland, Canada, Finland, Israel, the USA, Estonia, Great Britain, Japan and South Korea). The average value for all analysed OECD countries amounted to 16.53% in 1991-2016, 21 countries recorded the average value of the indicator below the average for all analysed countries, while 15 countries were characterized by a higher value than the average for OECD.

#### 4. DIVERSIFICATION OF GDP *PER CAPITA* IN OECD COUNTRIES – EMPIRICAL ANALYSIS

Analysing the spatial diversification of the economic development of a given country, one can use such macroeconomic variables as GDP *per capita* or gross value of fixed assets *per capita* (Trojak, 2016, p. 185). The study used GDP *per capita*, expressed in thousands of USD in constant prices from 2010. The shaping of the level of this variable in the OECD group of developed countries is shown in chart 2.

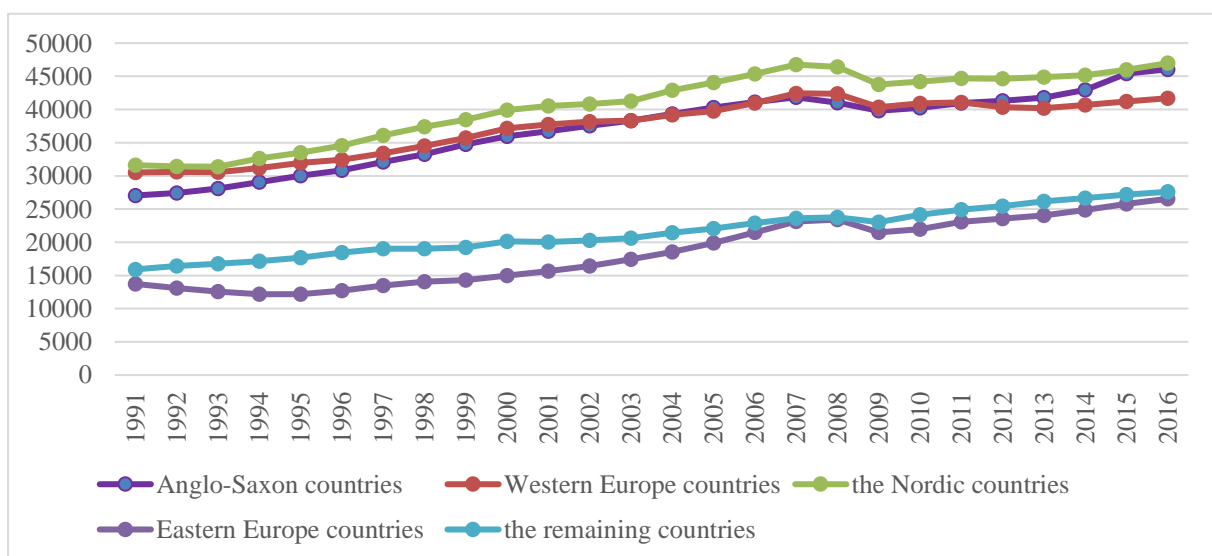


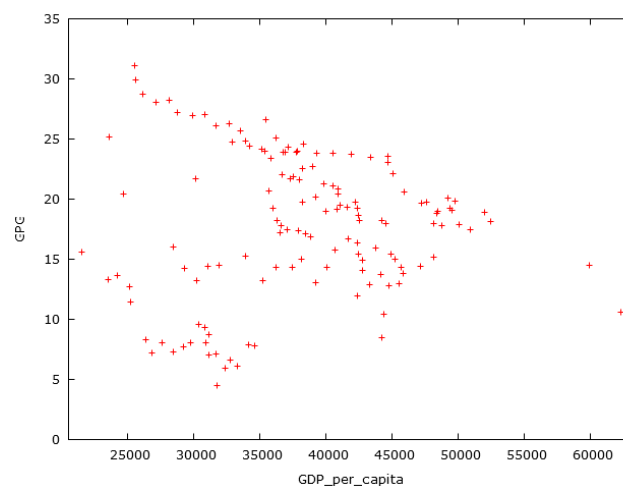
Chart 2: The level of gross domestic product per capita in groups of developed countries belonging to the OECD in 1991-2016 (USD, fixed prices from 2010). Own study based on <http://www.oecd.org/about/>; access: 22.02.2019

You can see several of the following dependencies. The GDP per capita values of all analysed groups moved in parallel trajectories, but there is a clear difference between the level of gross domestic product per capita in Eastern Europe countries and in the group of the remaining group and the other three groups of countries (Nordic countries, Anglo-Saxon countries and Western Europe countries). Eastern Europe countries and the remaining countries were characterized by significantly lower values than the average value for all countries in the analysed period (approx. 31,02 thousands of USD) and they did not approach this value in any year. The group of Nordic countries was characterized in each of the analysed years by the highest average value of GDP per capita (in this group, the highest values of gross domestic product were recorded by Norway approx. 54.07 thousand USD and the lowest by Finland approx. 34.4 thousand USD). In turn, the lowest values in the entire analysed period were recorded in the group of Eastern Europe countries (the lowest values of the GDP per capita was characteristic for Latvia approx. 15.48 thousand USD and the highest by the Czech Republic approx. 23.53 thousand USD). It is worth noting that the difference between GDP per capita in the group of Nordic countries and in the group of Eastern Europe countries is more than double. Analysing individual countries included in the OECD, one can assumed that the lowest values in the entire analysed period were characteristic for Mexico (approx. 14.69 thousand USD), and it was more than five times lower than in Luxembourg, where the average GDP per capita fluctuated around 75,89 thousand USD. 17 countries recorded the average value of GDP per capita below the average for all countries being part of the OECD, while the remaining countries recorded a higher value. The nearest GDP per capita value for all OECD countries was recorded by Great Britain (approx. 33.53 thousand USD) and Spain (approx. 29.36 thousand USD).

## 5. ANALYSIS OF RELATIONS BETWEEN THE GENDER PAY GAP AND THE ECONOMIC GROWTH IN OECD

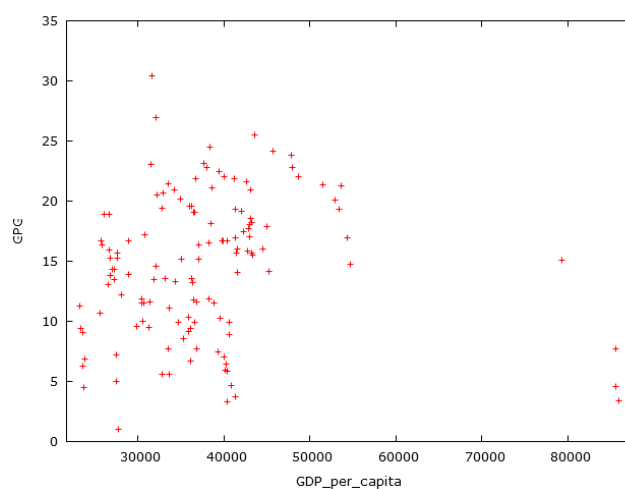
In order to verify the hypothesis presented in the introduction of the study on the relationship between the level of gender pay gap and the level of GDP *per capita*, the GRETl program (<http://gretl.sourceforge.net/>) was used in particular groups of developed countries belonging to the OECD. The values of the gender pay gap and GDP *per capita* were presented using charts. On the vertical axis, percentages of pay inequalities between the genders are presented, while on the horizontal axis, the value of GDP *per capita* for individual groups of countries. The results for each group are presented in charts 3-7.

*Chart 3: Values of the gender pay gap in relation to GDP per capita in the group of Anglo-Saxon countries*



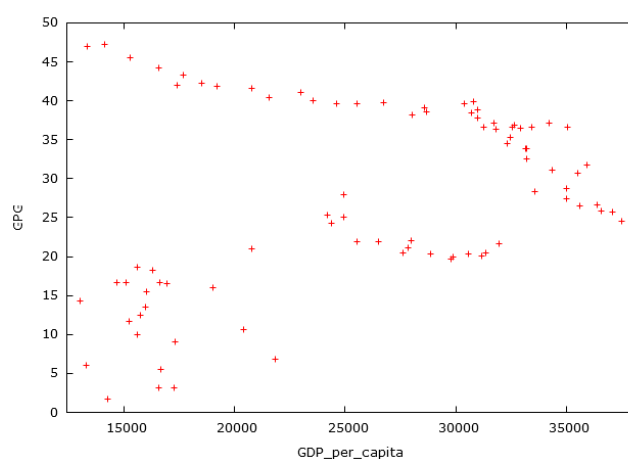
*Own study*

*Chart 4: Values of the gender pay gap in relation to GDP per capita in the group of Western Europe countries*



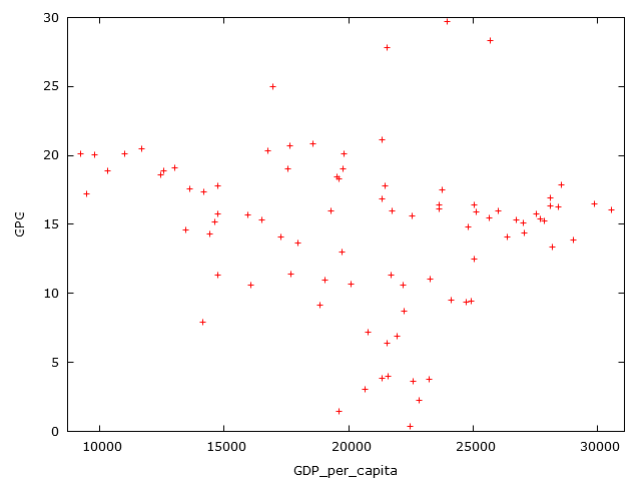
*Own study*

*Chart 5: Values of the gender pay gap in relation to GDP per capita in the group of the remaining group*



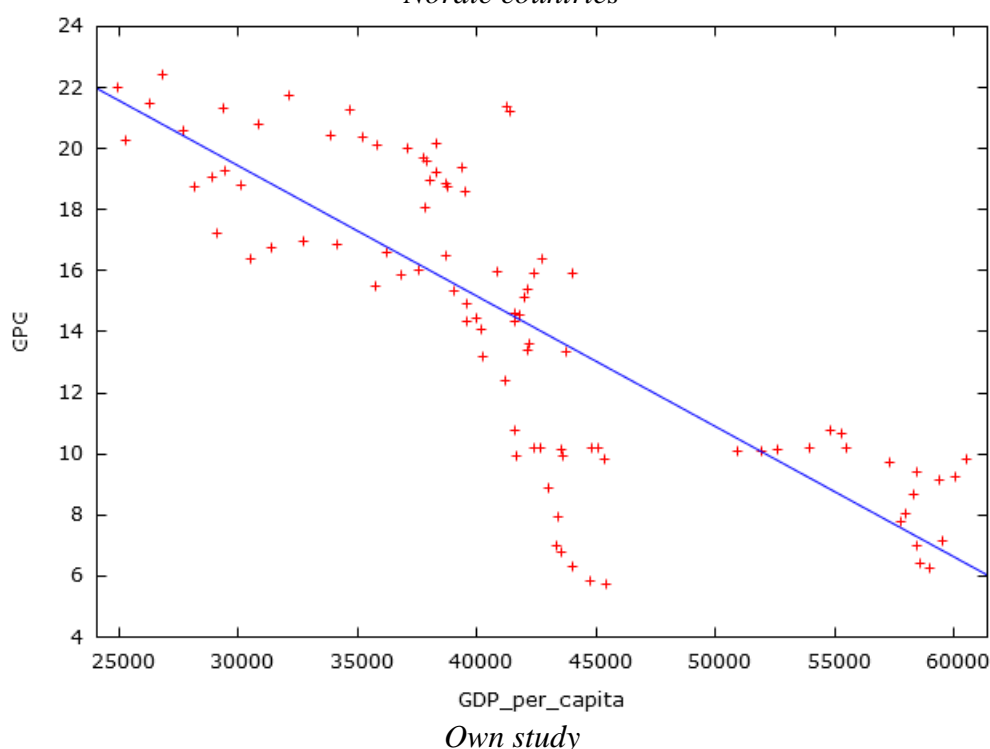
*Own study*

*Chart 6: Values of the gender pay gap in relation to GDP per capita in the group of Eastern Europe countries*



*Own study*

*Chart 7: The values of the gender pay gap in relation to GDP per capita in the group of Nordic countries*



The presented charts of individual groups of countries do not allow to identify a simple relationship between the values of the gender pay gap and GDP per capita and thus not confirm the hypothesis set in the introduction. The only group of countries in which one can see the relationship between the variables studies is the group of Nordic countries. For this group, the linear model adjusted by OLS method was estimated (the line in the graph was marked as blue). In this group, it can be noticed that as the gross domestic product per capita increases, the values of the gender pay gap are decreasing. However, one should not draw far-reaching conclusions, because the model was adjusted (the independent variable described the dependent variable) only in 64%, as evidenced by the value of the revised  $R^2$ . The p value at the level  $<0.0001$  means that the measurement was statistically significant. Taking into account the other groups of countries, one cannot identify any relationship between the variables studied, which was presented with the help of other charts showing the relationships between variables in Western Europe countries, Eastern Europe countries, Anglo-Saxon or the remaining group. On the basis of the analysed variables describing both the value of the gender pay gap and the gross domestic products per capita, no significant relationships between them were identified. Thus, it does not allow to confirm the hypothesis set in the study, derived from the proposed Kuznets curve. The analysis carried out, in particular the results concerning the group of Nordic countries, however, they contribute to further research on the theory of Kuznets and its empirical verification. It is worth, with reference to the analysis of developed countries belonging to the OECD that has already been carried out, to expand the research with the use of other parameters, taking into account additional variables affecting the inequality between income, among others, human capital (OECD, 2001, p. 31). The impact of factors such as access to education on economic growth has been repeatedly emphasized, among others, by T. W. Schultz or G.S. Becker (Schultz, 1961, p. 15; Becker, 1992, p. 91). It is also worth conducting an analysis for each country separately, taking into account the fact that, despite the similarities of countries belonging to a given group, a different set of variables may influence the economy of a given country.

## 6. CONSLUSION

Since the creation of the theory of the Kuznets curve presenting the relationship between the economic growth of a given country and social inequalities, it has been the subject of many empirical analyses. The shape of the proposed curve (reverse parabola) gives grounds for concluding that in countries with higher income per capita social inequalities will be lower than in countries where GDP per capita is at a lower level. The analysis carried out in this study, however, does not give grounds to accept the hypothesis set in the introduction and thus not confirm the dependencies resulting from the Kuznets curve. It turns out that countries that have a very developed economy (Japan, South Korea or Israel) are struggling with very large inequalities between women's and men's wages. In turn, countries characterized by a significantly lower level of GDP per capita (Latvia or Estonia) are also characterized by high pay inequalities between employees of a different gender. The only group of countries that can be talked about in the context of any simple relationship between the variables studied is the group of Nordic countries. Analysing these countries, one can notice a negative correlation between the growth of the economy (identified by means of gross domestic product per capita) and wage inequalities (presented by means of the gender pay gap), however the model's matching factor does not allow for far-reaching conclusions. Although there are no grounds to accept the hypothesis presented at the beginning of the study, the analysis has an added value, because it provides a contribution to further research. The work has not identified a simpler linear relationship between the variables studied, but it is worth expanding the research with additional parameters describing other inequalities (e.g. the education level or average number of years of education in the population in working age (Bassanini, Scarpetta, 2001, p. 9), to check in practice whether the Kuznets curve applies to the highly developed countries included in the OECD structures.

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## ENVIRONMENTAL GOVERNANCE AS AN ELEMENT OF SUSTAINABLE DEVELOPMENT IN THE EUROPEAN UNION COUNTRIES

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### ABSTRACT

*Environmental governance is one of the dimensions of sustainable development. It is very important to know what factors particularly strongly affect environmental governance to be able to consciously shape it. A key issue considered in this publication is the impact of groups of variables that define social, economic and institutional-political governances on environmental governance. Data for the study described in this article were obtained from the website of Eurostat. Variables were assigned to environmental, social, economic and institutional-political governances and divided into stimulants, nominants and destimulants based on the description of the variables provided by Eurostat. These data were used to determine Hellwig's synthetic measure of environmental governance and to select those groups of variables assigned to the three remaining governances that have a significant impact on the environmental dimension of sustainable development. Total values for groups of variables relating to individual governances were determined for 28 selected European countries based on the values of the variables observed over successive ten years. These results were then subjected to the procedure of panel data modelling. A fixed effects model was then selected as the most appropriate model. The econometric model determined in the study describes environmental governance based on six groups of variables selected from among 17 groups characterizing social, economic and institutional-political governances.*

**Keywords:** *environmental governance, sustainable development, synthetic measure*

### 1. INTRODUCTION

Over the past two decades, eco-efficiency has been considered to be the most appropriate way to realize progress in a sustainable way. Eco-efficiency combines a concern for the economic rationality of projects with the environmental determinants of development. The need to combine economic efficiency with environmental efficiency is indisputable, because it leads to the selection of the most promising solutions from the point of view of the creation of environmental governance and economic governance (Angelis-Dimakis, Alexandratou, Balzarini, 2016). The use of appropriate tax-system instruments is a good example of motivators designed to enhance care for the environmental aspects of sustainable development. These instruments are meant to encourage entrepreneurs to introduce environmentally-friendly solutions, such as green sources of power (Andrei et al, 2016). More and more attention is paid every year to environmental factors due to the ongoing climate change. The range and speed of climate change make us realize that the present economic patterns should no longer be maintained and that it is necessary to develop new, completely different patterns, particularly

in the area of power supply and consumption (Lima et al, 2016). It is necessary to optimize the chain of biomass supply to power plants, among other things. Efforts taken in this direction should contribute to sustainable environmental and economic development (Zhao, Li, 2016). It should be emphasized in this context that measures taken to strengthen environmental governance have a positive impact on many social aspects, often greatly enhancing the quality of life for all. For example, the results of analyses indicate a positive relationship between environmental governance and social governance resulting from the use of recycling. Importantly, the benefits of recycling are manifold. Not only does it improve the quality of citizens' life, but it also entails more rational management, which accelerates economic growth (Horst, Freitas, 2016). Sustainable development is a very complex issue. It includes dimensions such as environmental, social, economic and institutional-political governances. Thus, only certain selected aspects are usually the subjects of literature about sustainable development. For example, authors often discuss the sustainable development of tourism (Ioncica, Ioncica, Petrescu, 2016). The problems of social inequality and universal access to healthcare are also frequently touched upon in the context of sustainable development (Paredes, 2016). These considerations also include areas such as sustainable energy development (Romano et al, 2016) and the impact of human activities on irreversible climate changes (Ouml, 2016). The purpose of this article has been determined by the complexity of the issues discussed. Namely, its purpose is to determine the strength and the direction of the impact of factors affecting social, economic and institutional-political governances on environmental governance, expressed by means of a synthetic measure. This paper presents a completely new approach, which is different from approaches previously adopted by researchers dealing with sustainable development. The author believes that the analytical solutions proposed in this paper will significantly contribute to the development of methodology allowing for a quantified description of the multi-dimensionality of environmental governance.

## **2. METHODOLOGY**

Data for the study were obtained from the website of Eurostat. The analysis included 28 selected European countries, which were examined from 2004-2013. Variables were assigned to individual governances and divided into stimulants, nominants and destimulants based on the description of the variables available in the Eurostat database (Tables 1-4).

*Table following on the next page*

Table 1: Groups of variables describing environmental governance

No.	Specification	Type of variable
1.	<b>Climate changes</b>	
1.1.	- greenhouse gas emissions in CO <sub>2</sub> equivalent	destimulant
1.2.	- greenhouse gas emissions per unit of energy consumed	destimulant
2.	<b>Energy</b>	
2.1.	- share of energy from renewable sources in gross final energy consumption	stimulant
2.2.	- share of energy from renewable sources in the consumption of transport fuels	stimulant
2.3.	- energy intensity of the economy; GDP at constant prices in 2000 (kgoe/1,000 euros)	destimulant
3.	<b>Air protection</b>	
3.1.	- air pollutants emitted by road vehicles per 100 km <sup>2</sup> – carbon monoxide	destimulant
3.2.	- air pollutants emitted by road vehicles per 100 km <sup>2</sup> – non-methane volatile organic compounds	destimulant
3.3.	- air pollutants emitted by road vehicles per 100 km <sup>2</sup> – nitrogen oxides	destimulant
3.4.	- air pollutants emitted by road vehicles per 100 km <sup>2</sup> – particulate matter	destimulant
3.5.	- average CO <sub>2</sub> emissions from new cars per 1 km	destimulant
3.6.	- emissions of acidifying pollutants per 1 km <sup>2</sup> – sulphur oxides	destimulant
3.7.	- emissions of acidifying pollutants per 1 km <sup>2</sup> – nitrogen oxides	destimulant
3.8.	- emissions of acidifying pollutants per 1 km <sup>2</sup> – ammonia	destimulant
4.	<b>Marine ecosystems</b>	
4.1.	- the size of the fishing fleet	destimulant
5.	<b>Fresh water resources</b>	
5.1.	- the percentage of population using at least grade II wastewater treatment plants	stimulant
5.2.	- water consumption per capita	destimulant
6.	<b>Land use</b>	
6.1.	- woodiness	stimulant
7.	<b>Biodiversity</b>	
7.1.	- stands damaged by defoliation	destimulant
8.	<b>Waste management</b>	
8.1.	- non-mineral waste generated per capita	destimulant
8.2.	- municipal waste generated per capita	destimulant
8.3.	- municipal waste disposed of by dumping per capita	destimulant
8.4.	- recycling of packaging waste	stimulant

Source: <http://wskaznikizrp.stat.gov.pl/> [accessed on 21 December 2016]

Table following on the next page

*Table 2: Groups of variables describing social governance*

No.	Specification	Type of variable
1.	<b>Demographic changes</b>	
1.1.	- fertility rate	stimulant
1.2.	- the rate of international migration	stimulant
1.3.	- the rate of actual population growth/decline	stimulant
2.	<b>Public health</b>	
2.1.	- life expectancy at age 65 years in good health	stimulant
2.2.	- standardized mortality rates from cardiovascular disease	destimulant
2.3.	- standardized mortality rates from malignant neoplasms	destimulant
2.4.	- standardized mortality rates from chronic diseases of the lower respiratory tract	destimulant
2.5.	- standardized mortality rates due to diabetes	destimulant
2.6.	- Euro Health Consumer Index EHCI	stimulant
2.7.	- urban population exposure to excessive PM10 levels	destimulant
2.8.	- urban population exposure to air pollution by ozone	destimulant
3.	<b>Poverty and living conditions</b>	
3.1.	- the risk of persistent poverty	destimulant
3.2.	- the risk of poverty or social exclusion	destimulant
3.3.	- inequality of income distribution	destimulant
4.	<b>Education</b>	
4.1.	- adults participating in education and training (%)	stimulant
4.2.	- public expenditure on education in relation to GDP	stimulant
4.3.	- young people not in further education	destimulant
4.4.	- the percentage of people aged 25-64 with at most lower secondary education	destimulant
5.	<b>Access to the labour market</b>	
5.1.	- the percentage of people in households without working people aged 0-17 years	destimulant
5.2.	- the percentage of people in households without working people aged 18-59 years	destimulant
5.3.	- the rate of long-term unemployment	destimulant
5.4.	- the unemployment rate according to LFS	destimulant
5.5.	- gender-based wage differentials	destimulant
6.	<b>Public safety</b>	
6.1.	- victims of fatal accidents per 1 million population	destimulant
7.	<b>Consumption patterns</b>	
7.1.	- electricity consumption in households per capita 1	destimulant

Source: <http://wskaznikizrp.stat.gov.pl/> [accessed on 21 December 2016]

Table following on the next page

*Table 3: Groups of variables describing economic governance*

No.	Specification	Type of variable
<b>1.</b>	<b>Economic development</b>	
1.1.	- gross domestic product growth per capita	stimulant
1.2.	- investment rate	stimulant
1.3.	- regional GDP per capita in purchasing power parity (PPP) at NUTS 3 level	destimulant
1.4.	- general government debt-to-GDP ratio	destimulant
1.5.	- the result (surplus/deficit) of the general government debt-to-GDP ratio	nominant
1.6.	- the energy consumption of transport and GDP – railway transport	destimulant
1.7.	- the energy consumption of transport and GDP – car transport	destimulant
1.8.	- the ratio between the energy consumption of transport and GDP	destimulant
1.9.	- GDP per capita in purchasing power parity (PPP)	stimulant
<b>2.</b>	<b>Employment</b>	
2.1.	- the employment rate for people aged 20-64 years	stimulant
2.2.	- duration of working life	stimulant
2.3.	- the economic and social inactivity rate for young people aged 15-24 years	destimulant
2.4.	- the economic and social inactivity rate for young people aged 20-24 years	destimulant
2.5.	- economic activity rate	stimulant
<b>3.</b>	<b>Innovativeness</b>	
3.1.	- the share of net revenues from sales of innovative products in net revenues from sales	stimulant
3.2.	- human resources for science and technology	stimulant
3.3.	- work productivity	stimulant
3.4.	- R & D expenditure relative to GDP	stimulant
3.5.	- the number of patent applications filed by residents to the European Patent Office per one million inhabitants	stimulant
<b>4.</b>	<b>Transport</b>	
4.1.	- freight transport – rail transport	stimulant
4.2.	- freight transport – inland waterway transport	stimulant
4.3.	- passenger transport – trains	stimulant
<b>5.</b>	<b>Production patterns</b>	
5.1.	- resource efficiency	stimulant
5.2.	- the share of organic farms in the total agricultural area	stimulant
5.3.	- organizations registered in the Eco-Management and Audit Scheme (EMAS)	stimulant

Source: <http://wskaznikizrp.stat.gov.pl/> [accessed on 21 December 2016]

Table following on the next page

Table 4: Groups of variables describing institutional-political governance

No.	Specification	Type of variable
1.	<b>Financing sustainable development</b>	
1.1	- Official Development Assistance (ODA) to developing countries	stimulant
2.	<b>The globalization of trade</b>	
2.1.	- imports from developing countries – countries that are on the list of recipients of development aid according to OECD DAC	stimulant
3.	<b>Cohesion and efficiency policy</b>	
3.1.	- the level of trust in public institutions – government	stimulant
3.2.	- the level of trust in public institutions –national parliament	stimulant
3.3.	- the level of trust in public institutions – the judiciary and legal system	stimulant
3.4.	- the level of trust in public institutions – police	stimulant
3.5.	- the level of trust in public institutions – political parties	stimulant
3.6.	- the level of trust in public institutions – European Parliament	stimulant
3.7.	- the level of trust in public institutions – European Commission	stimulant
3.8.	- the level of trust in public institutions – Council of the European Union	stimulant
3.9.	- corruption perception index	stimulant
4.	<b>Civil society – openness, participation and active citizenship</b>	
4.1.	- turnout in elections to the national parliament	stimulant
4.2.	- turnout in elections to the European Parliament	stimulant
4.3.	- the percentage of households with broadband Internet access at home	stimulant
4.4.	- the percentage of people using the Internet in contacts with public administration	stimulant
4.5.	- confidence index	stimulant
5.	<b>Equal rights in management</b>	
5.1.	- the share of women in management positions in the total number of employees in managerial positions	stimulant
5.2.	- women's participation in public life – national parliaments in the fourth quarter: unicameral or lower houses of parliaments	stimulant
5.3.	- women's participation in public life – national parliaments in the fourth quarter, the upper houses of parliaments	stimulant
5.4.	- women's participation in public life – local authorities (councillors): total	stimulant
5.5.	- women's participation in public life – local authorities: mayors or other leaders in municipal councils	stimulant
5.6.	- women's participation in public life – local authorities: councillors	stimulant

Source: <http://wskaznikizrp.stat.gov.pl/> [accessed on 21 December 2016]

The data collected in Tables 1-4 were used to determine the values of Hellwig's synthetic measure according to the procedure described in detail in the publication (Zyzewski, Polcyn, 2016). Total values were then calculated as a basis to carry out further stages of the study. Total values obtained for groups of variables describing individual governances, which were determined for each of the 28 countries covered by the analysis based on observation conducted over ten consecutive years, were tested statistically in order to select the optimal version of the model and method of its estimation. The testing proceeded in the following steps:

1. Choosing between the classical least-squares (CLS) model and the panel data model

A Breusch-Pagan test was first performed. The result of the Breusch-Pagan test was 4.27286e-049. The low value of this statistic suggests that the CLS model should be rejected. Therefore, individual effects should be introduced.

Since an individual effect was present in the model covered by the analysis, a fixed effects estimator or a random effects estimator should be selected. The estimators are selected by analysing Hausman test results.

2. A panel-data estimator

2.1. A random effects estimator: individual effects are treated as random variables.

The p-value from the Hausman test for random effects is 3.99785e-007. This value suggests that a random effects estimator should not be used in the analysis (Hausman, 1978; Hausman, Taylor, 1978).

2.2. A fixed effects estimator is used to estimate the parameters of individual effects models.

The p-value from the Hausman test for random effects is 3.99785e-007. The value of  $p < 0.05$  for the Hausman test indicates that a fixed effects estimator should be used in the analysis (Hausman, 1978; Hausman, Taylor, 1978).

Modelling was performed using software Gretl 2016d.

### 3. RESULTS AND DISCUSSION

Table 5 shows the successive steps in which the panel data model was improved by estimating fixed effects. The logarithm of likelihood was adopted as a criterion indicating the improvement of the model's explanatory properties and it was assumed that lower values of this measure pointed to more favourable explanatory properties of the model sought. The logarithm of likelihood in the model thus obtained was 105.8. This model had the lowest value and so was considered most preferred. Furthermore, the decreasing values of the Bayesian, Akaike and Hannan-Quinn information criteria indicate improvement of the explanatory properties of the model. Therefore, model (5) is the most appropriate model - Table 5 (Schwarz, 1978; Akaike, 1973; Hannan, Quinn, 1979).

*Table following on the next page*

Table 5: The results of the estimation of panel data for the dependent variable 'environmental governance' and fixed effects

Independent variables	Models describing the formation of the dependent variable				
	(1)	(2)	(3)	(4)	(5)
const	2.498** (0.5419)	2.868** (0.3456)	3.031** (0.3097)	3.026** (0.3092)	3.073** (0.3072)
Poverty and living conditions	0.4399** (0.1514)	0.4585** (0.1341)	0.4671** (0.1330)	0.4597** (0.1233)	0.4566** (0.1234)
Transport	-1.298** (0.4947)	-1.400** (0.4785)	-1.445** (0.4732)	-1.374** (0.4689)	-1.403** (0.4688)
Equal rights in management	-0.4963** (0.2294)	-0.4700** (0.2163)	-0.4858** (0.2144)	-0.5017** (0.2136)	-0.5058** (0.2138)
Demographic changes	0.4570** (0.2228)	0.4368** (0.2177)	0.4970** (0.2088)	0.5226** (0.2033)	0.5457** (0.2027)
Financing sustainable development	1.027** (0.5128)	0.9628** (0.4856)	0.9161* (0.4830)	0.9894** (0.4772)	1.008** (0.4775)
Employment	-0.6039 (0.4291)	-0.5761 (0.3767)	-0.5136 (0.3665)	-0.6639** (0.3017)	-0.6481** (0.3018)
Public safety	0.1237 (0.1327)	0.1298 (0.1248)	0.1342 (0.1242)	0.1525 (0.1230)	
Access to the labour market	-0.1709 (0.1988)	-0.1703 (0.1888)	-0.1828 (0.1861)		
Cohesion policy	0.1397 (0.1660)	0.1482 (0.1633)	0.1415 (0.1501)		
Public health	0.1480 (0.2037)	0.1340 (0.1935)			
Economic development	0.1504 (0.2170)	0.1812 (0.2047)			
Production patterns	0.2017 (0.3043)				
The globalization of trade	0.7542 (1.319)				
Consumption patterns	0.3427 (0.6831)				
Innovativeness	-0.0778 (0.1915)				
Civil society	0.0450 (0.1380)				
Education	0.05876 (0.2316)				
Additional criteria of model fit					
LSDV R <sup>2</sup>	0.817	0.816	0.816	0.815	0.814
Within R <sup>2</sup>	0.207	0.203	0.201	0.199	0.194
The logarithm of likelihood	-103.42	-104.18	-104.64	-104.94	-105.80
The Bayesian criterion	460.41	428.12	423.40	418.36	408.82
The Akaike criterion	296.84	286.37	285.28	283.87	281.60
The Hannan-Quinn criterion	362.45	343.23	340.68	337.82	332.63
The Durbin-Watson statistic	1.5668	1.5438	1.5286	1.5350	1.5275
Autocorrelation of residuals – rho1	0.0762	0.0879	0.0969	0.0940	0.9655

Source: own study based on modelling software Gretl 2016d

The value of LSDV  $R^2$  in model (5) indicates that the model explains about 81% of variation. It is worth noting that the size of this indicator underwent minor changes in all models taken into consideration (Table 5). The within-group variance is 0.194. The within-group variance depends on differences within a group - in this case, differentiation within the time series studied (Turczak, Zwiech, 2016). The variable 'poverty and living conditions' is most statistically significant in this model:  $p = 0.0003$ . An increase in the synthetic measure of poverty by one unit increases the synthetic measure of environmental governance by 0.4566. This correlation in combination with the measures of the variables discussed (Tables 1-2) may indicate that the problem of social inequality is deepening or that goods adversely affecting environmental governance are used to a lesser extent. The structure of the synthetic measure of environmental governance indicates that this measure increases with the reduced impact of adverse factors on environmental governance. Thus, an increase in the value of environmental governance may indicate a lower use of goods having adverse effects on environmental governance and the correlated higher levels of poverty. The second scenario assumes the presence of high-tech goods on the market and their low adverse impact on the environment, and also a simultaneous increase in poverty levels, which may indicate an increase in social inequalities. Poverty can be alleviated through the development of tourism, but the development of this branch of the economy may disturb environmental governance if the principles of sustainable development are not applied (Medina-Munoz, Gutierrez-Ferez, 2016). Poverty can be prevented by providing jobs to those at risk of poverty through an increased involvement of entrepreneurs in the idea of corporate social responsibility (Kao et al, 2016). It is indicated that two major obstacles to worldwide development are poverty and environmental protection in the context of sustainable development. The two problems are related to each other and are also associated with the use of the rule of law (Anjinappa, 2015). An increase in the measure of transport by one unit reduces the synthetic measure of environmental governance by 1.403. This figure indicates the well-known adverse effects of transport on environmental governance. An increase in the synthetic measure describing a group of measures relating to equal rights in management indicates a decline in the measure of environmental governance by 0.5058. The high value of this measure certainly requires in-depth research that will confirm or deny this regularity. An increase in the synthetic measure of demographic changes by one unit increases the synthetic measure of environmental governance by 0.5457. The analysis of the variables making up the demographic measure shows that these variables may also indicate the environment-based quality of life (Table 2). Financing sustainable development can also favourably affect environmental governance. An increase in the synthetic measure of financial resources for sustainable development by one unit increases the synthetic measure of environmental governance by 1.008. The positive direction of this variable's impact on the synthetic measure of environmental governance indicates that budgetary resources for sustainable development are properly allocated; in the present case, these resources were targeted to so-called developing countries. According to the model presented, this funding brought good results through the introduction of technology enhancing the growth of the synthetic measure of environmental governance (Table 5). An increase in the synthetic measure of employment adversely affects the development of the synthetic measure of environmental governance. An increase in the synthetic measure of employment by one unit in this model decreases the synthetic measure of environmental governance by 0.6481. This may be due to the regularity indicating an increase in the level of unfavourable factors for environmental governance resulting from the improvement of the economic situation of society: the higher the employment rate, the higher the purchasing power of consumer goods is. This is in contrast to the previously discussed role of poverty factors in shaping environmental governance.

#### 4. CONCLUSIONS

This study made it possible to determine the econometric model describing environmental governance based on the values of six groups of variables selected from among 17 groups characterizing social, economic and institutional-political governances. Of course, this does not mean that the other 11 groups of variables have no effect on the environmental dimension of sustainable development. However, the model specified in this article indicates correlations with the greatest impact. The knowledge of these correlations makes it possible to identify the areas on which efforts should be focused to improve environmental governance. Particular attention should be paid to the problem of poverty, which may be due to the presence of social inequality or a lower use of material goods. This is manifested by favourable impacts on environmental governance, but is not desirable for the economy. This direction of changes in society should not be supported. We should certainly strive to increase consumption among all strata of society while maintaining the principles of sustainable development in the area of environmental governance. The level of employment has a direct correlation with the level of poverty. This analysis confirms that an increase in the level of employment increases the purchasing power of consumer goods. The regularity indicating the adverse impact of the level of employment leads to the conclusion that an increased consumption of goods should be associated with marketing consumer goods that have low adverse impacts on environmental governance. This study has confirmed that budgetary spending on sustainable development has a positive effect on environmental governance. This indicates that the financial support for countries that are in unfavourable economic situation is justified in terms of the synthetic measure of environmental governance. The model presented in this paper shows that transport has an adverse impact on environmental governance. Therefore, the efficiency of transport should be improved through logistics activities and technological reduction of the harmful effects exerted by transport on environmental governance. The regularities presented in this article require further in-depth research on mutual interactions between individual domains of sustainable development. The aim of such research should be to identify new correlations, the knowledge of which will facilitate effective stimulation of sustainable development.

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# EXPLORING THE RELATIONSHIP BETWEEN SATISFACTION WITH TOURISM SERVICES, REVISIT INTENTION AND LIFE SATISFACTION

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## ABSTRACT

*The main purpose of this research is to explore the relationship between satisfaction with tourism services in different stages of a trip and satisfaction with general trip experience. Also explored is how satisfaction with general trip experience contributes to tourists' intention to revisit a tourist destination and to their general life satisfaction. Based on previous research a questionnaire was prepared and an empirical research was conducted on a purposive sample of 669 tourists. The results show that respondents are satisfied with all service aspects, but satisfaction with destination services is somewhat lower than satisfaction with services in other travel stages (pre-trip, en route, return trip). Satisfaction with travel/tourism services have a positive but, in terms of magnitude, different influence on satisfaction with general trip experience depending on different travel phase. Additionally, satisfaction with general trip experience contributes to revisit intentions and life satisfaction. Originality of this research is found in providing empirical evidence that is important to invest in service quality in tourism, especially in services provided at the tourist destination level. Also, this research contributes to exploring influences from tourism to life satisfaction. This research can serve as a basis for tourist destination marketing managers as well as travel agencies in developing their tourism offerings.*

**Keywords:** *leisure, life satisfaction, revisit intention, tourism services, travel experience*

## 1. INTRODUCTION

As the tourism industry has been growing rapidly in recent decades, many scientists are studying the impact of tourism on the quality of life of the tourism community as well as on the quality of life of tourists. In the focus of this research is the impact of satisfaction with the trip experience on travellers' life satisfaction and their behavioural intention to revisit a tourist destination. Namely, many studies have established that leisure time has a positive and significant impact on subjective quality of life, i.e. on general life satisfaction (Andrews and Withey, 1976; Eusebio and Carneiro, 2014). Also, the effect of vacation, as a part of leisure time, has been investigated by several authors (Dolnicar, Yanamandram and Cliff, 2012; Sirgy, Kruger, Lee and Yu, 2011). Additionally, Sirgy, Kruger, Lee and Yu (2011) proved the existence of a spill-over effect of travel trips on all domains of life satisfaction and, in turn, on overall life satisfaction. At the same time, many scientists have found evidence supporting the positive impact of satisfaction with travel experience on revisit intention to a specific tourist destination (Ali, Ryu, and Hussain, 2015; Triantafillidou and Petala, 2015; Baker and Crompton, 2000; Kim, Woo, and Uysal, 2015), which is particularly important in tourist

destination management. However, the question that is still not answered is: Which factors determine tourists' satisfaction? Since a journey takes place in several phases, does each phase have the same impact on travellers' satisfaction with the experienced tourism services? Neal, Sirgy and Uysal (1999) developed a model to explain the impact of satisfaction with different aspects of tourism services (satisfaction with pre-trip, en route destination, and return trip services) on satisfaction with travel/tourism services. Following that study, Neal, Uysal and Sirgy (2007) confirmed the impact of satisfaction with the service aspects of travel phases on satisfaction with travel/tourism services, satisfaction with tourism experiences and satisfaction with leisure life and life in general. However, opposed to previous studies, this study explores the direct impact of satisfaction with tourism services in different stages of travel on satisfaction with the general trip experience and its impact on revisit intention and travellers' life satisfaction. More specifically, this paper seeks to address three main research questions: (1) Does satisfaction with tourism services in the various travel phases affect satisfaction with the general trip experience? If so, which phase of a trip has the greatest impact on travellers' satisfaction? (2) What is the impact of travellers' satisfaction with general trip experience on the revisit intention? (3) What is the impact of travellers' satisfaction with general trip experience on travellers' life satisfaction? The paper is structured as follows. The section following the introduction focuses on conceptualisation and hypotheses development. Section 3 then explains the methodology employed and section 4 discusses research findings. The last section of the paper draws conclusions, outlines managerial implications, notes limitations and suggests further research ideas.

## **2. CONCEPTUALIZATION AND HYPOTHESIS DEVELOPMENT**

### **2.1. Tourist satisfaction with tourism services and trip experience**

Customer satisfaction is a well-researched topic. It is usually defined as the result of a cognitive process described by the disconfirmation of expectations theory (Bearden and Teel, 1983; Oliver, 1980). Moreover, Zeithaml and Bitner (2003) define customer satisfaction as a customer's evaluation of a product or service in terms of whether that product or service has met the customer's needs and expectations. In a tourism context, satisfaction is primarily defined in relation to pre-travel expectations and post-travel evaluations (Chen and Chen, 2010). Tourists use many services during their travels and accordingly gain a plethora of different experiences. In a leisure and tourism context, experience is seen as "a subjective mental state felt by participants" (Otto and Ritchie, 1996, p. 166). It is achieved through active engagement with travel and tourist participation in the given context of tourism settings, as well as through the emotional senses of touch and affect (Park and Santos, 2017) during travel. Numerous factors influence tourism experience. For example, Da Costa Mendes, Do Valle, Guerreiro and Silva (2010) argue that the combination of inherent factors and associated satisfaction, in terms of acquired and consumed services during the holistic tourism experience, determine the overall satisfaction level of tourists. Tourist satisfaction is of great importance to tourism service providers and to the management of tourism destinations since scholars have found that tourists' experiences and their revisit intentions are positively related (Chang, Backman and Chih Huang, 2014). Satisfaction with different aspects of services during travel has a significant role in determining overall satisfaction with travel/tourism services (Neal, Uysal and Sirgy, 2007). Moreover, satisfaction with travel/tourism services is derived from satisfaction with the different service aspects of travel/tourism phases, that is, pre-trip services, en route services, destination services and return-trip services (Neal, Sirgy and Uysal, 2004). Hence, it is likely that general travel satisfaction can be influenced by satisfaction with diverse services experienced by tourists in different travel phases. Therefore, we propose: H1: Satisfaction with travel/tourism services related to the (a) pre-trip affects satisfaction, (b) en route trip, (c) destination site, (d) return trip, affects satisfaction with the general trip experience.

## 2.2. Revisit intention

Numerous studies show that tourist experience satisfaction influences post travel behaviour and intention to revisit the same tourist destination (Um and Crompton, 1990; Baker and Crompton, 2000; Oppermann, 2000; Chen and Tsai, 2007; Chi and Qu, 2008; Kim, Ritchie and McCormick, 2012; Tsai, 2016; Barnes, Mattsson and Sørensen, 2016; Agapito, Pinto and Mendes, 2017; Zhang, Wu and Buhalis, 2018). Previous studies have examined the effect of memorable tourism experiences on behaviour intention, loyalty and revisit intention in different contexts. Chen and Tsai (2007) argue that experience quality has a direct influence on satisfaction and behavioural intentions. Following from that, memorable tourism experiences are found to be the key element for destination competitiveness and the main reason for future destination choices. A destination's ability to provide memorable tourism experiences positively enhances the probability of tourist revisits to that destination (Oppermann, 2000). Similarly, Tsai's (2016) research indicates that memorable tourism experiences have a direct as well as indirect effect on tourists' behavioural intentions. Experiences that are longer remembered, that is, experiences that create long-lasting memories for tourists, have the strongest impact on revisit intentions (Barnes, Mattsson and Sørensen 2016). Kim, Ritchie and McCormick (2012) developed one of the most recognized memorable tourism experience scales based on seven dimensions: hedonism, refreshment, local culture, meaningfulness, knowledge, involvement and novelty. They pointed out that the memorable experiential components of involvement, hedonism and local culture positively affect behavioural intentions to revisit the same destination. Zhang, Wu and Buhalis (2018) used the seven-dimension scale of Kim, Ritchie and McCormick (2012) in their study and provide additional evidence to support the claim that memorable tourism experience is a very important factor that influences revisit intention to the destination among international tourists. In their research, Zhang, Wu and Buhalis (2018) approach revisit intention as revisit propensity, revisit willingness and revisit probability in the near future, similar to many other studies (e.g. Hung, Lee and Huang, 2014; Wang and Wu, 2011) that include both affective and behavioural elements. Researchers argue that a memorable tourism experience is the best predictor of future destination choices. Only those destinations that provide memorable tourism experiences to tourists can attract a greater number of repeat-visit tourists. According to these arguments, we posit: H2: Satisfaction with trip experience has a positive effect on revisit intention.

## 2.3. Life satisfaction

The concept of life satisfaction has been in the focus of researchers for a long time. It refers to the degree to which a person positively evaluates the overall quality of life (Veenhoven, 1996). Life satisfaction is part of the wider concept of subjective well-being, which includes life satisfaction as a cognitive component, along with positive and negative feelings as affective components. This involves judging the fulfilment of one's needs, goals and desires (Sirgy, 2012, pp. 13). There are many life domains in which quality of life can be experienced (Andrews and Withey 1976; Cummins, 1996). Several scholars have established that leisure time has a positive and significant impact on subjective quality of life, i.e. on general life satisfaction (Andrews and Withey, 1976; Eusebio and Carneiro, 2014). The influence of vacationing, as a significant component of leisure time, has also been investigated by different authors (Dolnicar, Yanamandram and Cliff, 2012; Sirgy, Kruger, Lee and Yu, 2011), and many of them have confirmed the role of tourism in improving the quality of life of tourists and life satisfaction in general (Kim, Woo and Uysal, 2015; Moscardo, 2009; Neal, Uysal and Sirgy, 2007; Neal, Sirgy and Uysal, 2004). Furthermore, Sirgy, Kruger, Lee and Yu (2011) showed that positive and negative memories generated from the most recent trip do not contribute only to overall satisfaction in leisure life but also to satisfaction in other life domains, such as, among many different aspects, social life, family life, love life, work life, health and safety, and travel life.

Also, they showed that leisure travel makes a significant contribution to tourists' life satisfaction. Further, Kim, Woo and Uysal (2015) revealed that satisfaction with travel experience is a significant predictor of quality of life. Accordingly, we can argue that life satisfaction can also be influenced by trip experience. Hence, we propose: H3: Satisfaction with trip experience has a positive effect on life satisfaction. Figure 1 illustrates a conceptual model based on the previously stated hypotheses.

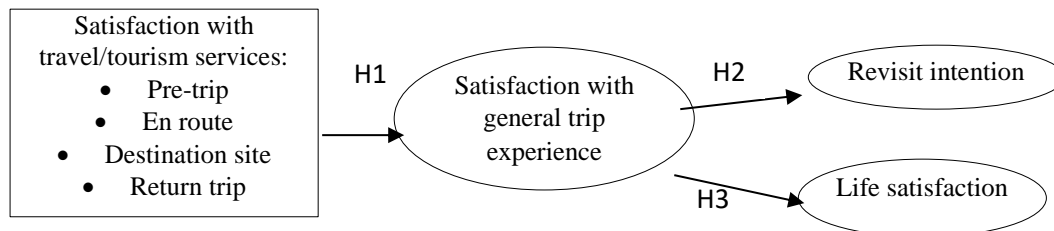


Figure 1: Conceptual model (The authors)

### 3. METHODOLOGY

This study takes a quantitative approach to measuring tourists' perceptions toward satisfaction with tourism services related to different phases of the trip, satisfaction with the general trip experience, revisit intention and travellers' life satisfaction. The survey method was applied to collect data. A paper-and-pencil questionnaire was designed using previously established scales. In addition to demographic questions and those concerning the behaviour of tourists, the questionnaire included constructs which were measured by items taken from the existing literature. Satisfaction with travel/tourism services relating to different stages of the trip was measured using twelve items taken from a study by Neal, Uysal and Sirgy (2007) and referred to pre-trip services, en route services, destination services and return-trip services. Three statements borrowed from Neal, Uysal and Sirgy (2007) were used to measure the respondents' satisfaction with the general trip experience. The construct revisit intention was measured using four items taken from Kim, Woo and Uysal (2015). Furthermore, four statements that measure the travellers' life satisfaction were based on existing literature (Kim, Woo and Uysal, 2015; Sirgy, Kruger, Lee and Yu, 2011). All items were measured on a five-point Likert-type scale, ranging from "strongly disagree" to "strongly agree". The questionnaire was created in English and translated into Croatian. The research was conducted in January 2016. A purposive sample was used. The initial number of questionnaires was 1000. A total of 669 valid questionnaires were collected, accounting for 66.9% of the distributed questionnaires. Data processing and analysis applied univariate and multivariate statistical methods in SPSS ver 25. Results of the research are presented below.

### 4. FINDINGS

#### 4.1. Sample characteristics

The socio-demographic structure of the sample is shown in Table 1. The majority of the respondents are females (67%) from 21 to 25 years of age (48.9%). Most of them are students (42.6%) or employees (41.4%) with income from 5000 to 10000 HRK (approx. 666-1333 EUR) (40.2%). Almost half of the respondents (45.5%) have secondary school qualifications and they mostly live in a family of four members (43.8%).

*Table following on the next page*

*Table 1: Socio-demographic profile of respondents (n=669) (Research results)*

<b>Characteristics</b>	<b>Respondents</b>	
	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	221	33.0
Female	448	67.0
<b>Age</b>		
18 – 20	54	8.1
21 – 25	327	48.9
26 – 30	67	10.0
31 – 35	45	6.7
36 – 40	25	3.7
41 and more	151	22.6
<b>Occupation</b>		
Employed	277	41.4
Entrepreneur	36	5.4
Unemployed	71	10.6
Student	285	42.6
<b>Level of education</b>		
Primary school	9	1.3
Secondary school	311	46.5
College	268	40.2
University	75	11.2
Masters	5	0.7
Doctorate	1	0.1
<b>Family members</b>		
one	21	3.1
two	63	9.4
three	125	18.7
four	293	43.8
Five or more	167	25.0
<b>Income (HRK)</b>		
Up to 3500 (466 EUR)	32	4.8
3501 – 5000 (467-666 EUR)	136	20.3
5001 – 10000 (667-1333 EUR)	269	40.2
10001 – 15000 (1334-2000 EUR)	165	24.7
above 15000 (2001 EUR)	63	9.4
Unknown	4	0.6

The study also provided some additional information on the travel behaviour of respondents. The results are illustrated in Table 2.

*Table following on the next page*

Table 2: Travel behaviour of respondents (n=669) (Research results)

<i>Description</i>	<i>Respondents</i>	
	<i>Frequency</i>	<i>Percentage</i>
<b><i>Travel duration</i></b>		
2 days	133	19.9
3-7 days	380	56.8
8 or more days	156	23.3
<b><i>Type of travel</i></b>		
City travel in Croatia	80	12.0
City travel abroad	156	23.3
Touring vacation	102	15.2
Outdoors vacation	23	3.4
Sun and sea vacation	163	24.4
Skiing and winter vacations	19	2.8
Cruise	13	1.9
Visiting friends and relatives	60	9.0
Business travel	29	4.3
Other	24	3.7
<b><i>Accompanying person</i></b>		
Alone	58	8.7
Family	149	22.3
Partner	182	27.2
Friends	184	27.5
Organized group (tour, church, school, etc.)	77	11.5
Other	19	2.8
<b><i>Frequency of travel</i></b>		
Once a month or more	27	4.0
Once in three months	91	13.6
Twice a year	215	32.1
Once a year	252	37.7
Less than once a year	84	12.6
<b><i>Information sources</i></b>		
Through a travel agency	53	7.9
Through other travel organizers (schools, associations...)	60	9.0
Radio or TV	8	1.2
Press	8	1.2
Internet	168	25.1
Social networks	15	2.2
Personal contact (friends or relatives)	232	34.7
Previous experience	113	16.9
Other	12	1.8

The respondents who completed the questionnaire usually choose the sun and sea vacation (24.4%) or city travel abroad (23.3%) and touring vacation (15.2%). They mostly stay in the destination from 3 to 7 nights (56.8%). In most of the cases the respondents travelled with friends (27.5%) or a partner (27.2%). The frequency of their travel is once (37.7%) or twice (32.1%) a year and they mostly use information from personal contacts (34.7%). After analysing the sample structure, the respondents' answers were analysed using descriptive statistics. Also, the sample was checked for reliability using Cronbach's alpha. Results are presented in Table 3.

Table 3: Descriptive statistics and reliability analysis (Research results)

No.	Construct / Item	Mean	SD	Cronbach alpha
<b>SATISFACTION WITH TRAVEL/TOURISM SERVICES RELATED TO THE PRE-TRIP</b>		<b>4.0211</b>	<b>0.71454</b>	<b>0.68</b>
1.	I was satisfied with the quality of service provided by travel and tourism professionals (e.g. travel agents, ticket agents, hotel reservation clerks) while planning the trip.	3.943	0.9273	
2.	Making travel and accommodation arrangements for this trip was basically problem-free	4.328	0.8321	
3.	The cost of the services provided by travel and tourism professionals in helping me with the travel logistics was reasonable and well worth it.	3.797	0.9852	
<b>SATISFACTION WITH TRAVEL/TOURISM SERVICES RELATED TO THE EN ROUTE TRIP</b>		<b>4.2445</b>	<b>0.64932</b>	<b>0.62</b>
4	I was pleased with the quality of the services provided in transit to the vacation site.	4.144	0.8787	
5	My travels to the vacation site were basically problem-free.	4.417	0.8786	
6	The cost of travel to the vacation site was reasonable and well worth it.	4.168	0.8261	
<b>SATISFACTION WITH TRAVEL/TOURISM SERVICES AT THE DESTINATION SITE</b>		<b>3.9833</b>	<b>0.69413</b>	<b>0.73</b>
7	Tourism services at the vacation site were of high quality. These services made a richer experience for me.	3.951	0.8646	
8.	Tourism services provided at the vacation site were basically problem-free.	4.161	0.8212	
9.	The cost of tourism services at the vacation site was reasonable and well worth it.	3.828	0.9068	
<b>SATISFACTION WITH TRAVEL/TOURISM SERVICES RELATED TO THE RETURN TRIP</b>		<b>4.1714</b>	<b>0.67272</b>	<b>0.71</b>
10	I was satisfied with the quality of the services provided by those who assisted me on the way home (e.g. bus drivers, ticket agents).	4.043	0.8639	
11	My return travels were basically problem-free.	4.364	0.8418	
12	The cost of travel home from the vacation site was reasonable and well worth it.	4.106	0.8257	
<b>SATISFACTION WITH THE GENERAL TRIP EXPERIENCE</b>		<b>4.4219</b>	<b>0.68933</b>	<b>0.84</b>
13.	All in all, I feel that this trip has enriched my life. I am really glad I went on this trip.	4.446	0.7869	
14.	On this trip I accomplished the purpose of the vacation. This experience has enriched me in some ways.	4.466	0.7880	
15.	This trip was rewarding to me in many ways. I feel much better about things and myself after this trip.	4.347	0.8080	
<b>REVISIT INTENTION</b>		<b>4.3641</b>	<b>0.74880</b>	<b>0.84</b>
16.	I would like to recommend others to visit this destination.	4.490	0.8090	
17.	Revisiting the destination would be worthwhile.	4.451	0.8597	
18.	I will revisit the destination.	4.202	1.0058	
19.	I would like to stay more days in the destination.	4.316	0.9503	
<b>LIFE SATISFACTION</b>		<b>4.0839</b>	<b>0.73058</b>	<b>0.85</b>
20	Overall I felt happy upon my return from that trip.	4.398	0.8227	
21.	My satisfaction with life in general was increased shortly after that trip.	4.022	0.9553	
22.	Overall, this trip was memorable, having enriched my quality of life.	3.868	0.9928	
23.	Overall, I felt happy upon my return from that trip	3.937	0.9927	
24.	I am generally happy with my life	4.179	0.8534	

Research results in the above table indicate that all constructs are reliable and satisfactory (Taber, 2018), having Cronbach alpha coefficients between 0.62 and 0.85. Also, the constructs' average values are above 3.98, indicating that respondents on average positively evaluate their satisfaction with travel/tourism services, satisfaction with the general trip experience, revisit intention and life satisfaction. Multiple regression analysis was performed to answer the posited research questions concerning how, and to what extent, satisfaction with tourism services in various trip stages affects satisfaction with general trip experience. In this analysis satisfaction with general trip experience is used as a dependent variable, and the Enter method was used for entering independent variables into the multiple regression analysis. Results are presented in Table 4.

*Table 4: Multiple regression analysis for variables predicting satisfaction with general trip experience (Research results)*

<i>Independent variables</i>	<i>b</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
Constant	1.654	0.176		9.413	0.000
Pre-trip services	0.095	0.041	0.098	2.331	0.020
En route services	0.095	0.049	0.089	1.928	0.054
Destination services	0.326	0.041	0.324	7.945	0.000
Return-trip services	0.161	0.046	0.156	3.480	0.001

$R^2 = 0.545$ ; Adjusted  $R^2 = 0.297$ ; Standard error = 0.583; F ratio = 67.714 ( $p < 0.000$ )

As evident, satisfaction with travel/tourism services in the various stages of travel was statistically significant in estimating satisfaction with the general trip experience and explained a total of 54.5 % variance of tourist satisfaction ( $R^2=0.545$ ) with general trip experience. Among four independent variables, three significantly influenced satisfaction with the general trip experience of tourists, whereby destination services ( $\beta=0.324$ ,  $p=0.000$ ) had the most significant impact. The impact of pre-trip services ( $\beta=0.098$ ,  $p=0.020$ ) and return-trip services ( $\beta=0.156$ ,  $p=0.001$ ) on satisfaction is minor, while the impact of en route services is very small and marginally significant ( $\beta=0.089$ ,  $p=0.054$ ). To examine whether there is a connection between satisfaction with the general trip experience and revisit intention, and between satisfaction with the general trip experience and life satisfaction, we carried out a correlation analysis by applying Pearson's correlation coefficient.

*Table 5: Correlation coefficients (Research results)*

	<b>Satisfaction with trip experience</b>	<b>Revisit intention</b>	<b>Life satisfaction</b>
<b>Satisfaction with trip experience</b>	1	0.614*	0.671*
<b>Revisit intention</b>		1	0.584*
<b>Life satisfaction</b>			1

*\*Correlation is significant at the 0.01 level (two-tailed).*

A positive correlation was observed ( $r=0.61$ ,  $p=0.000$ ) between the variables satisfaction with the general trip experience and revisit intention. Also, a positive correlation was established between the variables satisfaction with the general trip experience and travellers' life satisfaction ( $r=0.67$ ,  $p=0.000$ ).

## 5. CONCLUSION

Our research contributes to exploring the relationship between satisfaction with tourism services in different stages of trip and satisfaction with general trip experience. Furthermore, it also explores how satisfaction with general trip experience contributes to tourists' intention to revisit a tourist destination and to general life satisfaction. Research results indicate that respondents are satisfied with all service aspects, but it can be noted that satisfaction with

destination services is somewhat lower than satisfaction with services in other travel stages (pre-trip, en route, return trip). This is probably due to the fact that tourists, when selecting a travel destination, have high expectations relating to the destination's offering and future experiences in that chosen destination. Satisfaction with travel/tourism services in a destination has the highest influence on satisfaction with general trip experience. This is reasonable as the majority of travel experience is gained and encountered in this phase. Similar results were obtained by Rääkkönen and Honkanen (2013) who found that tour operator services at the destination and accommodation services explain the success of a vacation experience. Also, while staying at a destination, tourists will be largely influenced by their contact with tourism service providers and by the services they receive (Su, Huang and Chen, 2015). Our research also proved that satisfaction with general trip experience is positively related with revisit intention, similar as in previous research (Chang, Backman and Chih Huang, 2014; Da Costa Mendes, Do Valle, Guerreiro, & Silva, 2010). Additionally, satisfaction with general trip experience is positively related to life satisfaction, which is also consistent with previous research (Neal, Sirgy and Uysal, 1999; Neal, Uysal and Sirgy, 2007). This paper contributes to the research stream related to exploring the influence of tourist experience on life satisfaction and on intention to revisit a specific destination. It contributes by providing quantitative evidence to tourism managers concerning the importance of investing in service quality in tourism, especially in services provided at the tourist destination level. This is underscored by research findings indicating that the intention to revisit a destination is more likely in satisfied tourists. If we take into account that tourists, when selecting a destination to visit, are influenced by friends, relatives and acquaintances, we can easily conclude that it is of the utmost importance to invest in service quality in a specific destination as well as to deliver value to tourists during their stay in that destination. The limitations of this paper are related to the mostly female sample and to the great number of young tourists, but this could be resolved by including older respondents in further research. Also, further research could focus on comparing satisfaction with travel/tourism services among different tourist segments based on demographic characteristics, length of stay or travel motivation. Hence, managers in destinations should focus on providing better tourist experiences by developing service quality related to the tourism offering in a tourist destination, as this contributes not only to satisfaction with general trip experience but also to revisit intention and life satisfaction.

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## ORDERING AND PRIORITY OF ENTITLEMENTS IN THE PROBLEM OF DEGRESSIVELY PROPORTIONAL ALLOCATION

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### ABSTRACT

*Significant discrepancies between populations in the smallest and in the largest member state of the European Union resulted in the departure from the principle of proportional allocation for the sake of the so-called degressively proportional allocation, which ensures each member of the community a fair parliamentary representation. Nevertheless, there is a problem in practically applying this principle, i.e. there are no unique indications as regards the actual allocation. The conditions specifying degressive proportionality determine the entire set of feasible solutions, that contains typically many elements. The selection of one solution in the case of a given allocation is always an arbitrary decision. The paper puts forward an objective and natural manner of indicating one degressively proportional solution, that can be applied in all problems of integer distribution. The main idea consists in defining an ordering relation which generates entitlements in a set of all feasible solutions, and then in seeking for maximal elements of this relation. It turns out that the mentioned order is consistent with a degressively proportional function of priority, which can uniquely point to a concrete, desired allocation. This type of fair distribution modeling is known as one of viable approaches to solving a problem of integer proportional distribution of gains and burdens. As a result, the proposed algorithms of allocation can be seen as efforts to modify some known and practically tested methods of proportional apportionment, and then to implement them in the problem of degressively proportional allocation.*

**Keywords:** *allocation, priority, rounded degressive proportionality, transfer order*

### 1. INTRODUCTION

The majority of aspects of modern societies are related to a problem of allocating benefits and obligations. Businesses, communities, government entities and international organizations have to make decisions regarding the methods of distribution. In most of cases the allocation depends on the values of agents participating in division, the so-called claims. The values are typically expressed numerically, but their interpretation can be essentially diverse. When dividing a firm's profit, it is for example the number of shares held; when electing a social representation, it is the population of respective constituencies; while in case of shared cost of investment – the degree of its use by individual investors. The two natural and commonly applied methods of allocation are equal and proportional divisions, when agents are respectively allocated the same

number of goods or burdens corresponding to the share of the agent's entitlement in total entitlements of all agents participating in allocation. Nevertheless, there are cases when the classic rules are deliberately violated. Usually these cases are provoked by the significant variation in values of agents. As a result, the equal division is not approved, while the proportional rule results either in the marginalization of the share in the allocated goods of the least privileged agents or in the excessive share in obligations allocated to agents with the largest entitlements. Therefore, some intermediate solutions are sought after, in order to ensure common gains, approved by all participating agents. One of such solutions is a degressively proportional distribution. The degressively proportional distribution allocates goods (or obligations, henceforth called goods) among all agents participating in the division depending on their claims, so that the agents with larger entitlements are allocated a number of goods greater or equal to a number allocated to the agents with smaller entitlements, simultaneously subject to some limit, i.e. the relation of the number of allocated goods to the value of claims of more privileged agents cannot exceed this relation for less privileged agents. Therefore, compared to a proportional allocation, less privileged agents are favored by the degressively proportional allocation, as they are allocated more goods than in case of a proportional allocation. Formally this can be written that if claims are defined by the sequence  $P = (p_1, p_2, \dots, p_n)$ , where  $0 < p_1 \leq p_2 \leq \dots \leq p_n$ , then the sequence of nonnegative values  $S = (s_1, s_2, \dots, s_n)$  is a degressively proportional allocation with respect to the sequence  $P$  when

$$(1) \text{ for every } 1 \leq i < n, s_i \leq s_{i+1}.$$

$$(2) \text{ for every } 1 \leq i < n, \frac{p_i}{s_i} \leq \frac{p_{i+1}}{s_{i+1}}.$$

Most generally, we assume that the sequence  $S$  has nonnegative values. We deal in this paper only with degressively proportional allocations of indivisible goods, therefore we additionally assume that the terms of the sequence  $S$  are integers. The total number, denoted by  $H$ , of goods to be allocated is obviously predetermined, and the numbers:  $m$  – minimal and  $M$  – maximal number of goods obtainable by agents, respectively, with minimal and maximal claims are also fixed. In other words, the following conditions must furthermore be met:

$$(3) s_1 = m \text{ and } s_n = M$$

$$(4) s_1 + s_2 + \dots + s_n = H,$$

called the boundary conditions of allocation.

As research into degressively proportional integer allocation progressed, the two lines have emerged: investigating the rounded degressive proportionality or RDP (Maciuk, 2011; Florek, 2012; Serafini, 2012; Lyko, J. and Rudek, 2013; Pukelsheim, 2014), and the unrounded degressive proportionality or UDP (Ramirez-Gonzalez, 2010; Pukelsheim, 2010; Grimm et al, 2011; Słomczyński and Życzkowski, 2012; Dniestrzański, 2014; Cegielka et al, 2016; Grimm et al, 2017). They differ as regards meeting the condition (2): under RDP the sequence  $S$  must satisfy (2), while under the UDP it has not, as it suffices that the inequalities  $\frac{p_i}{r_i} \leq \frac{p_{i+1}}{r_{i+1}}$  hold for a certain sequence  $R = (r_1, r_2, \dots, r_n)$ , where the sequence  $S$  is the rounding of  $R$ . This paper deals with the rounded degressive proportionality, therefore we seek for solutions from the set  $DP(P, m, M, H)$  of all sequences  $S = (s_1, s_2, \dots, s_n)$  with integer terms satisfying the conditions (1)–(4). The set  $DP(P, m, M, H)$  can be empty for certain  $P, H, m, M$  and then there is no allocation that is degressively proportional with respect to the sequence of claims  $P$ .

However, generally, under properly fixed boundary conditions, the cardinality of the set  $DP(P, m, M, H)$  is big, and the problem of how to pick up one out of many elements emerges. As a result, it is not possible to point to a specific allocation in a unique way, without agreeing to optional, additional conditions. Assuming that the degressive proportionality is a necessary replacement of classical, Aristotelian rule of proportional allocation, one can accept that the proposed allocation should best represent the proportionality of agents' entitlements. As a consequence, such allocation should be sought after in the set  $DP(P, m, M, H)$ , that is nearest to the proportional division, i.e. the degression of the allocation should exclusively result from specifically determined boundary conditions (3) and (4). At this point, one has to answer the question regarding the allocation nearest to the proportional division. Łyko and Rudek (2013) put forward one interpretation using a metric approach to indicate such a sequence  $S$  that minimizes a Pythagorean distance from a line representing the proportional distribution, as a recommended solution. In this paper, the idea of selecting a degressively proportional sequence that is nearest to a proportional allocation will be presented using a properly defined relation of order on the set  $DP(P, m, M, H)$ , and also a relation of priority for each agent to be allocated subsequent units of a good.

## 2. TRANSFER ORDER ALLOCATION

The boundary conditions, indispensable elements of RDP, significantly affect the possibility of reaching the allocation that is almost proportional. All potential RDP allocations can be distant from allocations which could be called proportional. The greater the difference between the proportion  $M/m$  i.e. the ratio of the maximal and the minimal number of goods that can be allocated to agents, and the ratio of the maximal and the minimal value of agents, the more distant any RDP allocation from proportionality. For instance, in case of the European Parliament (EP), with populations of member states determining the allocation of mandates, the ratio of the population of the largest (Germany) and the smallest state (Malta) equals about 197, while the ratio  $M/m = 96/6 = 16$ .

The set  $DP(P, m, M, H)$  of all RDP allocations, subject to boundary conditions, can be written in the form

$$DP(P, m, M, H) = \left\{ S = (s_1, s_2, \dots, s_n) \in \mathbb{N}^n : m = s_1 \leq \dots \leq s_n = M, \frac{p_1}{s_1} \leq \dots \leq \frac{p_n}{s_n}, \sum_{i=1}^n s_i = H \right\}.$$

The number of elements of the set  $DP(P, m, M, H)$  is always finite, yet it can be arbitrarily large. When the set  $DP(P, m, M, H)$  is empty, we state that an RDP allocation subject to given boundary conditions does not exist. Otherwise, one element of the set  $DP(P, m, M, H)$  will be identified that can be considered the nearest to proportional, subject to given boundary conditions. Cegielka et al. (2016) defined the terms of positive transfers and a positive transfer relation:

**Definition 1** ( $TR_+$ ). The set of positive transfers is defined as follows:

$$TR_+ = \left\{ (t_1, t_2, \dots, t_n) \in \mathbb{Z}^n : \sum_{i=1}^n t_i = 0, \sum_{i=1}^k t_i \leq 0 \text{ for } k = 1, 2, \dots, n \right\}$$

whereas its elements are called *transfers*.

**Definition 2** (relation  $\leq_{TR_+}$ ). A positive transfer relation on a nonempty set  $DP(P, m, M, H)$  is called a relation  $\leq_{TR_+}$  such that

$$S \leq_{TR_+} S^* \Leftrightarrow \exists T \in TR_+, S^* = S + T.$$

The property  $\sum_{i=1}^n t_i = 0$  (in definition 1) ensures that the vectors  $S$  and  $S^*$  (in definition 2) have equal sums of terms, i.e. they represent the allocations of the same number of goods. The property  $\sum_{i=1}^k t_i \leq 0$  regards the direction of a transfer – from smaller to greater agents. It follows from the definition of RDP that the deficits of goods allocated to agents (following a degressively proportional division) is not reduced as their sizes increase. Thus the transfer of goods in this direction is justified if we want to reach the allocation as close to proportionality as possible. Hereafter instead of a positive transfer relation we shall briefly call it a transfer relation. Cegielka et al. (2016) proved the theorems with consequences that a relation  $\leq_{TR_+}$  is a partial order and is not a linear order. A partially ordered set (poset)  $DP(P, m, M, H)$  with a relation  $\leq_{TR_+}$  will be denoted by  $(DP(P, m, M, H), \leq_{TR_+})$ . A relation  $\leq_{TR_+}$  orders the set of degressively proportional allocations. If the relation  $S \leq_{TR_+} S^*$  holds, we guess that the allocation  $S^*$  is nearer to the proportional allocation than the allocation  $S$ . The statement that a poset  $(DP(P, m, M, H), \leq_{TR_+})$  is not linearly ordered implies that in some cases degressively proportional allocations can be incomparable. In that case the relation  $\leq_{TR_+}$  does not indicate which of the incomparable allocations is closest to the proportional allocations. This can raise doubts as to practical worth of the relation  $\leq_{TR_+}$ . The ambiguity problem can be overcome if we suitably modify a method with a priority function that is applied in case of proportional allocations. This approach also allows to reach a desired allocation using a simple and transparent algorithm.

### 3. DEGRESSIVELY PROPORTIONAL PRIORITY

The allocation using a fixed priority is conducted as follows. The successive units out of the total of  $H$  goods are allocated to agents with the maximal entitlements to another unit of the good at the given stage of division. The methods using the concept of priority in proportional allocation assign the respective units of the good in a sequential way, one at a time, until the supply of  $H$  is depleted, whereas a priority to obtain another unit of the good is defined in a number of ways. Conventional, practically applied methods imply, for example, that a priority is the ratio of entitlements and the number of units of the good already assigned at the given stage of allocation. Hence, at each stage of a different agent can be prioritized to get another unit of the good. The degressive proportional allocation generates divisions satisfying the conditions (1)–(4) which favor smaller agents at the expense of greater agents, compared to proportional allocation. With this in mind, if we want to get the allocation that is nearest to proportional division, we define a priority as follows: at each stage of division, a greater agent has got a higher priority to be assigned another unit of the good than a smaller agent. The sequential, single distributing of goods in proportional allocation makes it possible to accomplish the division for any sequence of entitlements  $P$  and for any positive number  $H$ . It is because one does not expect here that the principle of proportionality should be satisfied, and thus, even if a particular allocation at each stage is often considered proportional, it is not proportional in a strict sense. The case of degressively proportional divisions is different. Assigning just one unit of the good can result in the violation of conditions (1)–(2). Even if it happens only at one stage, the generated division will not be degressively proportional, for example, when this is the last unit of the allotted good. In order to avoid it, one should modify the standard method. The modified method will be called Modified Priority Allocation (MPA). At the first step, an agent  $p_n$  is assigned  $b_n = M$  units of the good, and each following agent gets a minimum number  $b_i$  of units, subject to conditions (1)–(2).

The allocation  $B = (b_1, b_2, \dots, b_n)$  is called a base division (Maciuk 2011; Łyko, Maciuk 2016), and is generated according to the recursive relationship given by the formula:

$$(5) \quad b_i = \max \left\{ m, \left\lfloor \frac{p_i}{p_{i+1}} s_{i+1} \right\rfloor \right\}, \text{ for } i < j$$

beginning from  $j = n$ , whereas  $b_j = M$ .

As can be easily seen, a base division is independent from a given priority of assigning successive units of the good. If it is not possible to be accomplished, it means that the total number  $H$  of units is either too small or too big so as to achieve a degressively proportional division subject to conditions (3) and (4). In other words, given the boundary conditions, the set  $DP(P, m, M, H)$  is empty. In the case when all units are distributed in the first step, the division is completed, if not, in the next step, the unit of good is allocated to the agent with the highest priority at that moment. This step ends when the allocation received in this way fulfills the conditions (1) - (3). Otherwise, one unit will be allocated (not exceeding, of course, the number of goods to be allocated  $H$ ) to the agents of the next, greatest at a given step of division, priorities until the conditions (1) - (3) are met for the first time. If this is not possible, the procedure should be repeated starting assigning units of good in this step from the agent whose priority is the next in order. This procedure continues until all goods are distributed. This iterative procedure of allocation ensures that at each step the generated allocation satisfies the conditions (1)–(2).

The condition (4) does not have to be satisfied. In addition, one can show the examples of such values  $P, m, M$  and  $H$ , that  $H$  goods cannot be allocated in this way. It suffices to consider such  $P$  that  $\frac{p_{i+1}-p_i}{p_i} < m$  and  $m \neq M$ , because then, on one hand, each agent has to get the same number of goods, while on the other hand, the smallest agent and the greatest agent have to get unequal numbers of goods. In such a case however,  $DP(P, H, m, M)$  is an empty set, and such allocation does not exist at all. Moreover, one can prove that the allocation indicated by the MPA is the maximal element of the set  $DP(P, H, m, M)$  ordered by the relation  $\leq_{TR_+}$ .

**Theorem:** Given  $\frac{p_{i+1}-p_i}{p_i} < m$  and nonempty set  $DP(P, H, m, M)$ , the allocation generated by the MPA algorithm is a maximal element of the poset  $(DP(P, m, M, H), \leq_{TR_+})$ .

**Proof:** It is known that the allocation generated at each step of the MPA procedure satisfies the condition (2). Because the priority generating function is defined by the formula  $f(i, j) = \frac{p_i}{j}$ , then each subsequent step begins by transferring one unit of the good to the agent with the greater number  $i$  and  $s_i < M$  at this moment of allocation, because due to the condition (2) this agent has the highest priority among such agents.

Suppose a contrario that the allocation  $S^a = (s_1^a, s_2^a, \dots, s_n^a)$  generated by the MPA procedure is not a maximal element of the poset  $(DP(P, m, M, H), \leq_{TR_+})$ . Then there exists such  $S^b = (s_1^b, s_1^b, \dots, s_n^b) \in DP(P, m, M, H)$  and such nonzero positive transfer  $T$ , that  $S^b = S^a + T$ . Let  $k = \max\{i: s_i^b > s_i^a\}$ . Then  $s_k^b > s_k^a$  and  $s_l^a \geq s_l^a$  for  $l < k$ . Thus  $\sum_{i=1}^n s_i^b > \sum_{i=1}^n s_i^a = H$  – a contradiction, because  $S^b \in DP(P, m, M, H)$ .

#### 4. CASE STUDY

*Table 1: Base allocation and next iterations creating MPA (own elaboration)*

Table 1: Base allocation and next iterations creating MPA (own elaboration)																					
State	Pop <sup>1</sup> .	Base	Next iterations																		MPA
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
DE	82064	96	96																	96	
FR	66662	78	78	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	95	
IT	61306	73	72	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	88	
ES	46438	56	55	1	1		1	1	1		1	1		1		1	1		1	67	
PL	37967	51	45	1	1		1	1	1		1		1		1	1			1	55	
RO	19760	32	24		1			1	1				1			1				29	
NL	17235	28	21		1			1	1				1			1				26	
BE	11290	21	14		1			1					1			1				18	
EL	10794	21	14		1			1					1			1				18	
CZ	10446	21	14		1			1					1			1				18	
PT	10341	21	14		1			1					1			1				18	
SE	9998	21	14		1			1					1			1				18	
HU	9830	21	14		1			1					1			1				18	
AT	8712	19	13		1			1					1							16	
BG	7154	17	11		1			1					1							14	
DK	5701	14	9		1			1					1							12	
FI	5465	14	9		1			1					1							12	
SK	5408	14	9		1			1					1							12	
IE	4664	13	8		1			1					1							11	
CR	4191	12	8		1								1							10	
LT	2889	11	6		1															7	
SI	2064	8	6																	6	
LV	1969	8	6																	6	
EE	1316	6	6																	6	
CY	848	6	6																	6	
LU	576	6	6																	6	
ML	434	6	6																	6	
Total	445520	694	584	4	20	2	4	18	6	2	3	4	1	19	2	4	12	3	2	4	694

Table 1 presents the construction of the MPA method, considering the respective iterations, applied to allocate the seats in the European Parliament among 27 member states (excluding the United Kingdom – see first column), based on claims determined by populations of these countries, subject to conditions imposed by the Treaty of Lisbon ( $m \geq 6, M \leq 96, H \leq 751$ ) (Treaty of Lisbon). According to the practice adopted in such procedures, we assume the variation of the numbers of seats as big as possible, i.e.  $m = 6$  and  $M = 96$ . Besides, political discourse points out that keeping the number of seats in the European Parliament negotiated in former terms should be considered valuable (Gualtieri, Trzaskowski 2013). As a result, the total number of allocated seats was assumed to equal  $H = 694$ , because it is the smallest number of seats, on one hand, enabling to accomplish a degressively proportional allocation, and on the other hand, to assign the number of seats to each member state at least the same as in the 2014–2019 term. Therefore, the solution fulfills the provisions of the Treaty of Lisbon, and respects the political

<sup>1</sup> Population in thousand, source: EU, Euroatom (2016).

status quo. The construction of allocations for other values of  $H$  is analogous. Column 3 in table 1 presents a degressively proportional division securing the number of seats for each member state that is at least the same as in the previous term. The following columns include the respective steps of the MPA procedure. In step 1, a base division according to the formula (5) is generated, and 584 seats are distributed in this way. In step 2, after finding the base division, one mandate is assigned to France, and the condition (2) is checked. Because (2) is not satisfied by the pair France–Italy, one mandate has to be assigned to Italy as well. After iteratively testing whether the condition (2) holds, it turns out that likewise one mandate should be given to Spain, and then, to Poland. At this point, the condition (2) holds, thus concluding step 2 of the procedure. In next step, analogously as before, additional mandates are distributed to all countries, so as to meet the conditions (1)–(3), beginning with France, down to Lithuania, inclusively. These steps are repeated until all mandates are distributed. In the example of generating the composition of the European Parliament, the MPA procedure involves 18 steps. It is worth noting that at each step, France gets always the first mandate, except the first one, because Germany cannot be assigned more seats in agreement with condition (3). Thus, in spite of the highest priority enjoyed by Germany, it is France, whose priority is ranked second, that gets the first one of mandates allocated at each step. It does not mean however, that this will proceed until France possibly gets a maximum of 96 mandates. It suffices to notice that if 695 seats were available for distribution, assigning a consecutive mandate to France at a subsequent, 19<sup>th</sup> step of the procedure would result in necessity to assign likewise one mandate to Italy, Spain, Poland, Romania and the Netherlands. Considering however that in case of 695 seats, the conditions (1)–(3) cannot possibly hold, this mandate would have to be assigned to the Netherlands.

## 5. CONCLUSION

In this paper we presented a unique manner of selecting a degressively proportional, integer allocation subject to given boundary conditions. Uniqueness has been achieved owing to additional, quite natural postulate that solutions possibly nearest to a proportional division are sought after. Giving preference to larger agents in this way can be justified by the fact that the introduction of a boundary condition  $M$  disadvantages those agents above all and they are greatest losers compared to proportional division. The relation of transfer order defined on the set  $DP(P, H, m, M)$  reflects this idea. Its maximal elements are allocations which give the greatest number of goods to the agents with largest claims. The ‘greatest’ of course means subject to conditions (1)–(4). The manner in which maximal elements are determined is not quite transparent. The search of the entire set  $DP(P, H, m, M)$  is required. In many cases, especially in general election applications, this can discourage the users in practice. Political solutions affecting the widest spectra of recipients must be comprehensible for them and testable. Conventional, proportional, priority based methods of goods allocation can be generalized in this way so as to be able to apply them in the case of degressively proportional allocation. It turns out that the mentioned relation of order is compatible with a properly defined relation of priority. It means that the allocation generated by the priority based algorithm is also a maximal element of the transfer order relation. In this way one gets a method to determine a maximal element in transfer order defined on the set  $DP(P, H, m, M)$ , that is simple, easy to comprehend, does not require application of combinatorial techniques, and is known in the area of proportional allocations.

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# THE IMPACT OF PEER TO PEER ECONOMY ON TOURIST DESTINATION MANAGEMENT

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## ABSTRACT

*The name of the article is “The Impact of Peer to Peer Economy on Tourist Destination Management” the topic was chosen by author because of two important reasons, the first of them is the fact that peer to peer economy is standing on invisible border between the shadow economy and the one that is officially declared. The second fact is the importance of travel industry for the development of national and mainly regional economy, bringing taxes, employment and development. For some tourist destination the role of tourism is indisputable, but in some phases of life cycle of a tourist destination the number of tourist could bring more negatives impacts than the positives ones. Especially peer to peer economy appearing in accommodation services it means accommodations services offered by platforms like Airbnb could increase the range of accommodation options that are already unbearable within the tourist destination and unacceptable to the indigenous peoples, which can lead to a reduction in the attractiveness of this tourist destination for other visitors with the other result of tax cuts, loss of competitiveness and tension in respective industry. The aim of the article is to make analysis of the impact and possible limits of development and usage of peer to peer economy (sharing economy) in travel industry.*

**Keywords:** *Airbnb, Legislative background, Peer to peer economy, Tourist destination management*

## 1. INTRODUCTION

Without any doubt, tourism is an important part of the regional development of many regions of the world, and in many cases it is a significant part of the total gross domestic product (GDP) in many countries. History of modern tourism – mass tourism begins in 60's of the last century and has passed an incredible development which was favoured by increasing economy – it means the increasing purchase power of consumers in most countries of the world and the spreading out of aviation transport and all the services that are needed for the development of tourism and they are mentioned in realization factors. Increased interest in travel was reflected in the growth of various tourist destinations, where most of them managed to maintain a high attendance rate from 60 to the present. With the development of low-cost forms of transport and, above all, digital platforms, which make it very easy to obtain the additional element necessary for the realization of the holiday, and that is accommodation. However, the uncontrolled expansion of the range of accommodation services over the past 3 years through digital platforms such as Airbnb is beginning to bring many negative impacts, whether in the form of money leaks, unequal competition between traditional accommodation providers and providers through digital platforms, but above all causing an uncontrolled influx of tourists to the destination tourism is in many cases no longer acceptable in terms of sustainable tourism development.

## 2. THE IMPACT OF PEER TO PEER ECONOMY ON TOURIST DESTINATION MANAGEMENT

This chapter will specify the theoretical background necessary to understand peer-to-peer economy, tourism, tourism destinations and sustainable development.

## 2.1. Definition of tourism

Tourism is the human activity which is based on the move of people and spending their leisure time far away from the place they normally live with the aim to relax, visit interesting places, make shopping, visit some cultural or sport event etc. (Ryglová, 2011). For the development of tourism some factors must be kept for the sustainable development of tourism activities in the area. These factors can be divided in 3 main groups:

- selective factors (security of the place, image of the destination, etc. )
- localization factors (are telling us why to travel there, what can be seen there, etc.)
- realization factors (the possibility to eat, sleep in the destination how to get there as for transport and how to move within the destination) (Jakubíková, 2009).

## 2.2. Tourism destination

The concept of destination can be understood in general terms as routing, destination, place visited by a traveler. From the point of view of tourism, we can understand the destination in the narrower sense as a target area in a given region, a typical significant offer of tourist attractions and tourism infrastructure. In a broader sense, these are countries, regions, human settlements and other areas that are characterized by high concentration of attractiveness, developed services and other tourism infrastructure, resulting in a long-term concentration of visitors. For international visitors, the destination is either the entire country visited, or its region, or city. In some countries, the territory is divided into tourist, historical or administrative compact destinations (Palatková, 2006.). The tourist destination's attractiveness is largely influenced by the fact that tourism is an open system, see Figure 1. The tourism system, which is characterized by a high level of competition. In addition to external influences (political, economic, natural), the level of attractiveness of a travel destination is limited by the level of fulfillment of the prerequisites for the development of tourism (localization, implementation and material technical prerequisites for development) and well-implemented destination management and the resulting marketing presentation of a tourist destination for potential visitors. As mentioned above, one of the preconditions for the successful development of a tourism destination is the well-established destination management. Destination management can be seen as a management and organization system in a destination (city, region, region) based on collaboration between service providers, ie commercial entities, non-profit organizations, and public institutions. The basis of destination management is communication and marketing management. In the city, destination management can be applied to two specific target groups either tourists or investors (Jakubíková, 2009).

*Figure Following on the next page*

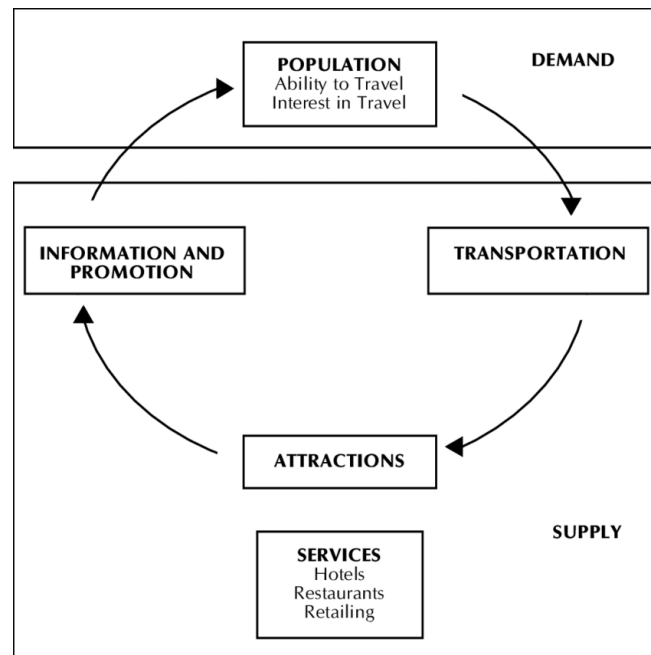


Figure 1: Tourism system (Stacy &Crompton, 2019)

Destination management oriented on tourism and tourist is implemented by cities or regions that have the prerequisites and internal resources for the development of a particular type of tourism, such as urban knowledge, cultural cognitive tourism, recreational tourism, sport tourism, congress tourism, health oriented tourism, educational tourism, rural tourism, incentive tourism, religious tourism, etc. According to the profile of the city and its offer, the strategy of tourism destination is created - cities with a comprehensive attractive offer of tourism products and services focus on external communication policy (promotion) cities with the prerequisites for tourism development, but with underdeveloped or inadequate supply, do business support in tourism or create specific products or product packages.

#### 2.2.1. Sustainable development of tourism destination

Sustainable tourism can simply be defined as a Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities. But considering the topic of sustainable development complex issues the conceptual definition should be mentioned. Conceptual definition consist in sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability. It's a must to:

- Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
- Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
- Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary. Sustainable tourism should also maintain a high level of not only tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices amongst them (WTO,2019). Without proper management of tourist destination development respecting sustainable development and lifecycle of destination (Figure 2 Lifecycle of Tourism Destination) the uncontrollable achievement of critical range of elements of capacity could cause significant problems like reducing the attractiveness of a tourist destination for potential visitors, but also the aversion of the locals to the visitors of the destination.

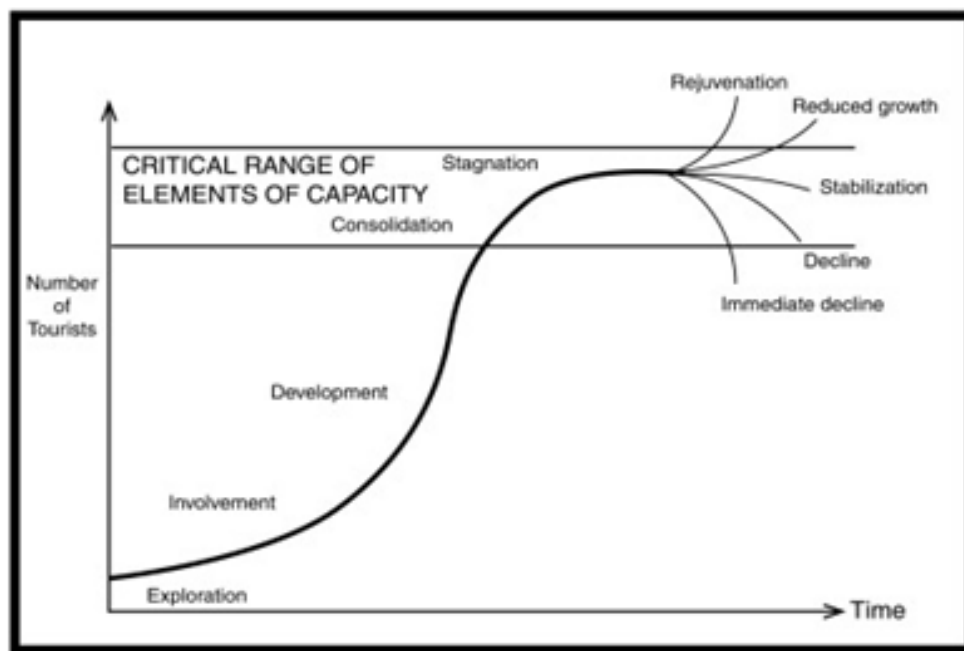


Figure 2: Lifecycle of Tourism destination (Butler, 2006)

### 2.3. Peer to peer economy and its impact on tourism destination

The concept of peer to peer economy, in very simple words, is based on the fact that the consumer is preferring to share long lasting services or goods that he/she needs via digital platforms than to buy them and be owner of them (Krajčák, 2017). The activities of peer to peer economy can be seen in many different areas of productin but especially in the sector of services like:

- accomodation servicies,
- transport servicies,
- financial servicies,
- musical industry
- education
- human labour etc.

Like in other areas of human activities there are some advantageges on consumers' part like on the part of the provider of servicies. In peer to peer economy a very often mentioned advantage for consumer is low price. This low price is the result of the basic principle of sharing economy and it's based on the two big advantages on providers part like the tax freedom and easy way

to start operating on the market of sharing economy. If the activities of providers are meeting and respecting the whole concept of sharing economy it means me as a provider “ I am offering services and goods that I buy for myself but in the time when I do not use them I decide to offer them to other people without charging them” it means that my activity is legal and both provider and customer are having benefits from this. But the problem of the sharing economy is that many providers are breaking the rules and the principles of sharing economy and they are buying goods and offering services with the aim to make profit for themselves. In this case they are making their business in the area of grey economy, because they do not pay the taxes and do not meet requirements that are given by laws of the country (Krajčík, 2017).

### **3. OBJECTIVES OF PAPER, RESEARCH METHODOLOGY**

The main objective of the presented paper is to analyse the impact of activities of peer to peer economy on tourism sector especially on tourism destination and its sustainable development. The objective of the paper is to present basic knowledge of selected impacts of peer to peer economy on tourist destinations and their sustainable development. During the process of writing this article the different methodology was used. First of all the analysis of literature sources were made to elaborate the brief theoretical background. To reach the aim of this article in the final chapter the methods of analysis of secondary data and field research were made.

### **4. CONCLUSION**

The impact of peer to peer economy on tourism destination can be seen from very different point of view. The author will take in consideration the money leak for town authorities caused by the presence of digital platforms offering services in tourism sector, disruption of the destination's life cycle, local people's aversion to the uncontrollable influx of tourists

#### **4.1. Money leak for town authorities**

As for fighting the illegal accommodations' providers- as a necessary consequence of the expansion of digital platforms offering accommodation - two different attitudes are shown on example of two cities that are considered as highly visited in Europe – Prague and Barcelona. As for the Czech Republic including the Prague there is one actual problem that the providers of AirBnB services have to face in the Czech republic – the electronic revenue records. This fact is complicated little bit the situation with offering and providing accommodation services, but the truth is that the most of electronic revenue records will not eliminate the problem of not paying local taxes and it doesn't solve the problem of offering the accommodation out of the rules for peer-to-peer economy. But the change is about to come with the new law. The law will extend the obligation to pay local fees to all accommodation units used for housing. It's one of the possible solution but the question is if it's enough, considering the fact that with better control, which is possible thanks to digital trace of every booking. The estimated money leaks (taxes, fees) is estimated to 12,5 mld Euro (Krajčík, 2017). The situation in Barcelona is totally different. From 2015 all accommodation providers including those having its offer on AirBnB must have license. The city has stopped issuing licences and many existing licences in the most heavily touristed areas such as Ciutat Vella (the old city) will not be renewed when they expire. After a hotline for reporting illegal flats opened the number of calls from the public rose from 39 in 2015 to 2,784 a year later. (Burgen, 2017). Even so, its rapid growth has aggravated city authorities who slapped a 600,000-euro (\$644,160) fine on Airbnb in November for advertising what they deemed to be illegal room rentals. Barcelona accused the company of posting 3,812 unlicensed rentals, a practice the city's Mayor Ada Colau described as intolerable. Airbnb said it would appeal the fine (Burgen, 2017). The city has doubled from 20 to 40 the team of inspectors who roam the streets seeking out illegal rentals, armed with apps that reveal at a click

whether properties are legal or not. By next year their number will have risen to more than 100. Cross-referencing licences with property advertised online, they identify rogue apartments which are then ordered to close down. Owners – when they can be found – face fines of up to €60,000 (Burgen, 2017).

#### **4.2. Disruption of the destination's life cycle**

Each tourist destination undergoes a natural evolution that is reflected in the different stages of the tourist destination's life cycle as periods of growth and decline over time in continuous cycle of exploitation, involvement, development, consolidation, decline, and rejuvenation. The individual phases reflect the attractiveness of the tourist destination, which is expressed by the number of visitors, the number of visitors is then naturally regulated by the amount and level of tourism services offered, such as transport, catering and accommodation services. In advanced tourist destinations, the conditions for the further development of a tourist destination with respect to the sustainable development of the destination are strictly monitored. The supervision of the tourist destinations authorities also aims to control and regulate the number of offered bed capacities in the tourist destination. However, with the advent of digital platforms offering accommodation services, regulation and oversight of the number of bed capacities offered is difficult, because not all accommodation offered through digital platforms can be considered legal and therefore the actual number of tourists is difficult to estimate. Larger, in many cases, an unbearable number of tourists leads to the saturation of the travel destination and to the emergence of local people's aversion to visitors.

#### **4.3. 'Tourism-phobia' - Local people's aversion to the uncontrollable influx of tourists**

Tourism-phobia is the fear, aversion or social rejection that the local residents feel in a destination towards the tourists generally due to the bad planning of tourism policies or the loss of control over the amount of tourists whose exploitation causes the destruction of the social fabric and tends to lead to a decrease in the local quality of life. The tourism-phobia can be seen in Barcelona, Rome, Venice, Palma de Mallorca, Berlin or some areas of Southeast Asia where citizen rebel against tourist. The reason for their rebellion is simple in their point of view tourism is a multi-million euro industry, however the high volume of tourists can sometimes result in problems of coexistence, causing a rise in the price of rent, destroying the "local fabric". The clear example of exaggerated tourism is Spain. This country received more than 82,8 million tourists in 2018, with growth exceeding 35% in the last 5 years (WTO, 2019). Touristification refers to the impact of the dense influx of tourists on the commercial and social fabric of certain neighborhoods. There is a lack of a more humane type of tourism which could explain the collapse in daily life as a result of the tourism industry. One, but not the only one negative impact of such tourist interest is an expulsion of the local population due to the pressure of the tourists. A tourist rental can be up to 4 times more profitable than a conventional one. This increases daily living costs. Degradation of the ecosystem and natural areas, prostitution, traffic, excess noise. Low, seasonal and unstable wages, acculturation, loss of calm and tranquility. Crowds of tourists descending from cruises and completely filling the center of cities in which they spend only a few hours. The "neighborhood irritability indexes" (BBC, 2016) are raised, making the phenomenon one of the main local concerns. Those indexes can be divided in 5 stages (euphoria, apathy, annoyance, antagonism and surrender) of irritation of the local population experiencing the tourist influx. The tourists' answer varies from graffiti saying „Go home tourists“ (The Independent, 2017) through neighborhood protests to acts of sabotage. The solution to reduce the negative impact of a shared economy on tourist destinations and their sustainable development is primarily a matter of dialogue between all stakeholders - government, tourism development authorities, tourism service providers as well as tourists.

Digital platforms and their functioning within the economy is another necessary development phase of the world economy, a great challenge and a challenge for all stakeholders will be to find a way to bring digital tourism services platforms under the control necessary to maintain equal competition in the market tourism, but also to provide the basic preconditions for sustainable tourism development and, above all, to prevent tourism-phobia from growing by the locals towards tourists.

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# BUDDHIST ECONOMICS AS A NEW MINDSET AT THE BUSINESS LEVEL

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## **ABSTRACT**

*Every religion (including Buddhism) forms some ethical attitudes through the transfer of certain values, which become a guide to individual actions, and exert an influence on the standards in a given society. The goal of this paper is to demonstrate (based on literature studies) how applying Buddhist teachings to economic practises can be a chance to improve societal well-being and condition of natural environment. This paper briefly explains about the essence of Buddhism and summarises the research findings which have led to the focus on a Buddhist perspective on economics. Works concerning Buddhist economics embrace different levels of the economy (from an individual perspective to the global one). The micro view has been chosen here to illustrate applying Buddhist values into business – the profiles of such companies as i. a. Patagonia or Greyston Bakery are the exemplifications.*

**Keywords:** *Buddhism, Buddhist economics, Buddhist enterprise, environment, social enterprise, well-being*

## **1. INTRODUCTION**

Every society has a particular world view that reflects their people's values, especially the ones concerning how companies or economies should function. It means that such factor as cultural background has an impact on the goals chosen by companies and affects the shape of economy. One of the cultural factors is religion, forming some ethical attitudes through the transfer of certain values, which become a guide to individual actions, and exerting an influence on the standards in a society. The aim of this paper is to characterise Buddhist economics and to discuss the impact of Buddhism on enterprises' goals and practices (based on literature studies). Explanation why adopting the values of Buddhist economics by enterprises can be expected to improve societal well-being and condition of natural environment is another aim of the paper. The author does not pretend to consider the relations between the religion and economic performances, only issues concerning possible to demonstrate influence of Buddhist values on economic activity are raised. The article is organised as follows. After the introduction, the first section explains about the essential nature of Buddhism, its fundamental teachings and values. A Buddhist perspective on economics is an object of analysis in the second section. Whereas Buddhism was found in the late 6th century B.C.E. and is the fourth largest religion in the world, Buddhist economics seems to be a relatively new field. The overview described herein is presented in three-aspects (consumption, production and Buddhist economics as a remedy to social and environmental problems). The subsequent part involves the topic of the Buddhist economics from a microeconomic perspective and confronts the notion of social enterprise with the conception of Buddhist enterprise. Another part shows the examples of Buddhist enterprises in the context of Buddhist rules. The last section offers some concluding remarks.

## **2. THE BASIC TEACHINGS OF THE BUDDHA**

To understand the essence of Buddhism, it is important to start with the most basic teachings of the Buddha, i.e., the Four Noble Truths (Bhikkhu, 2013, Daniels, 2010, p. 957), namely:

- 1) The existence of suffering (it includes birth, old age, sickness, and death as well as anger, jealousy, worry, anxiety, despair, dissatisfaction, and discontent).

- 2) Tribulation occurs because of ignorance of important life truths that cause individuals to cling, crave, or otherwise become attached to external worldly phenomena in the erroneous confidence that their possession will bring consummate happiness. It means that suffering stems from people's mental states, and from feelings of discontent that accompany never-ending desires<sup>1</sup>.
- 3) There is a need and a way out of suffering: it is required to gain understanding of important life truths, gaining the wisdom that not only enables people to cease suffering but to realise the rise of peace and joy.
- 4) Because greed and ego based on our mental illusions result in suffering and empty lives, there is a way leading to the cessation of them, known as the Noble Eightfold Path.

The Eightfold Path details the multifaceted nature of changes in mental processes, patterns and thoughts, actions and behavior that are required for progress towards reducing suffering. At the heart of this path is living mindfully. Mindfulness involves the kind of understanding about oneself and others that helps us live compassionately and with peace and joy. The ground rule of Buddhism is ahimsa – doing no harm. Ahimsa is a Sanskrit word which means “non-violence” or “non-injury”. People who respect for all living things and avoid of violence towards others generally eat vegetarian food and does not take part in animal sacrifice, because Buddhism teaches that we are interdependent, both with Nature and with any other creatures. Nothing and nobody exists as a separate being, and so each person's quality of life is dependent on others' happiness and on the condition of our planet. Acknowledging human's interdependence with Earth should provide an incentive to care for the natural environment (Kietliński, 2005, p. 29). The problem of the interdependence can be discussed in many aspects, including economic field (Czerniak, 2011, p. 157).

### 3. THE EMERGENCE OF BUDDHIST ECONOMICS AND ITS FUNDAMENTAL ASSUMPTIONS

Buddhist economics is not synonymous with traditional Buddhist thought, interpretation, or practice. First of all, original Buddhist texts about the economy seem to be scarce. Secondly, the economic problems in ancient times are different from those of the contemporary world, thus the most important modern economic phenomena cannot be meaningfully approached on the basis of the ancient knowledge. Buddhist Economics is not the same as economics of Buddhism as well. The former is a modern discourse that utilises elements of Buddhist thought to construct an alternative model of the economy (radically different from what mainstream Western economics offer) and the latter is a study of how Buddhists organise their economic life in real-world settings (past or present). Buddhist Economics is essentially normative while Economics of Buddhism is a descriptive endeavor (Zsolnai, 2016, p. 344). The former is a construct developed by Western economists and Buddhist thinkers inspired by Buddhist ethics. Buddhist economics has been discussed by, among others, E.F. Schumacher who can be described as a creator of Buddhist Economics as a field of study. His essay “Buddhist Economics” was first published in 1966. This is why we can talk about relatively new mindset. Another contributions to Buddhist economics include i. a. works by Payutto (1994), Inoue (1997), Gilbert (2006), Daniels (2010), Dalai Lama and van den Muyzenberg (2009), Zsolnai (2015), Tideman (2016), Magnuson (2016), Brown (2017), and Brown and Zsolnai (2018). An overview of some ideas of chosen authors is presented in Table 1 divided into three aspects: consumption, production and the significance of Buddhist economics. Such approach has been

<sup>1</sup> The range of choices people face every day has increased in recent years. Choosing well is especially difficult for those determined to make only the best choices. Individuals end up frustrated once they finally make a choice, because they have regret about the choices they gave up, and so much choice results in an escalation of expectations. Nowadays, a visible sign of people's endless desires is the clutter that piles up in their homes showing what is wrong in an affluent society (Schwartz, 2004).

inspired by V.P.A. Payutto (1994) who claimed that production, consumption, and other economic activities are not ends in themselves; they are means, and the end to which they must lead is the development of well-being within the individual, within society, and within the environment (p. 35).

*Table 1: Buddhist economics perspective – an overview (own compilation)*

An author	Consumption	Production	Buddhist economics as a remedy to social and environmental problems
Schumacher, 1966	The optimal pattern of consumption is maximum well-being with minimum use of resources.	Excessive reliance on the growth of production and income leads to overwork and dwindling resources	Buddhist economics is relevant not only for Buddhist countries but also for Western countries in solving their problems of overconsumption, welfare malaise, and destruction of nature. The Buddhist approach is a middle way between modern growth economy and traditional stagnation.
	Living without pressure and strain allows people to fulfill the primary injunction of Buddhism: "Cease to do evil, try to do good."		
Payutto, 1994	Right consumption is the use of goods and services to achieve true well-being. It is based on <i>chanda</i> , the desire for well-being, based on wisdom and intelligent reflection. Wrong consumption is the use of goods and services to satisfy the ignorant desires (based on <i>tanha</i> , the desire for pleasure objects, as fashionable clothes luxury cars)	Production is: - always accompanied by destruction (acceptable in some cases) - only truly justified when the value of the thing produced outweighs the value of that which is destroyed. Otherwise, it is better to refrain from production.	According to Buddhism, people who produce little in material terms may, at the same time, consume much less of the world's resources and lead a life that is beneficial to the world.  The wisdom of moderation is at the very heart of Buddhism. Desires are controlled by an appreciation of moderation and the objective of well-being.
Inoue, 1997	Consumption can be assessed on a four-rank system: C1 – consumption of goods vital for human existence, C2 – consumption of goods that make living better, C3 – consumption of goods that are not very necessary, C4 – consumption of frivolous or even harmful goods	Production can be ranked according to four levels: P1 – production that has a negligible negative impact on the environment, P2 – has a minimal negative impact on the environment, P3 – has some negative impact on the environment, P4 – production that involves a great deal of negative impact on the environment.	Gratitude toward other beings and a sense of regret about harming others call for the environmental and social assessment of products and industries. Economic efficiency should be redefined in the form of "not wasting".
	The combination of the variables presented above determines whether the production is relatively earth-friendly and the consumption is truly necessary.		
Daniels 2007	Goods and services should be provided and used to fulfill basic human needs and bring better quality of life—while keeping natural resource use and emissions of toxic and other waste over life cycle and supply and post-use chains at levels that will not jeopardise the ability to meet the needs of future generations (sustainable production and consumption)		Choices about what people seek from life and the environment should reflect the impact of these choices on long-term well-being.
Brown, 2017	It is in people's power to go beyond consumption, to connect to others with compassion, and to exist in harmony with Nature.	Prosperity in harmony with Nature.	The rules of Buddhist economics can supply a remedy for the most pressing problems of humanity, like climate change or global inequality.
Brown, Zsolnai, 2018	The interdependence with the Earth leads to measure the value of all the used resources as well as any damage done to the environment. Perspective should be intergenerational: because future generations are not provided a voice, the current one should include the value of the damage to societies in the future in making today's decisions.		The Buddhist economics model incorporates the negative economic costs of environmental degradation and harm to the ecosystems, and government policies based on these ensure natural resources are preserved and used effectively and sustainably.

Because of its chronological format of the content of Table 1. might be seemingly presenting evolution of views but it is worth pointing out, however, that the assumptions and conclusions are similar. Just as Buddhism as a religion, Buddhist economics connects the suffering of one person to the suffering for all people, and social welfare depends on the well-being of each person and of nature. By measuring how economic activities (consumption, production) affect the environment and other people, Buddhist economics supports the ground rule of doing no harm. Having this common denominator in view, Buddhist economics can be described as an alternative to the materialistic and individualistic mindset embracing various levels – from an individual perspective to the global economy. A microeconomic aspect is an object of further research.

#### **4. BUDDHIST VALUES IN BUSINESS – THE THEORETICAL APPROACH**

Non-violence is the main guiding value of Buddhist economics also for entrepreneurs. From a Buddhist viewpoint business is worth running if it reduces somehow the suffering of those who are affected. Benefits and losses should not be interpreted only in monetary terms or applied only to humans, because the capability of experiencing suffering is universal. Concurrently, it is important to stress that the Buddha never imposed limitations on his lay followers' efforts to be successful, he rather encouraged them to strive for success. But mindfulness is so vital to making a profit that one should first make a resolution not to exploit others (Rahula, 2008, pp. 13 and 15-16). Also Payutto (1994) collected the important messages of the Buddha not only for monks, but also for householders and business people. According to him wealth should:

- not be acquired by exploitation, but in a morally sound way (through effort and intelligent action),
- be saved and protected as an investment for the further development of livelihood and as an insurance against future adversity; when accumulated wealth exceeds these two needs, it may be put to the following uses: to support oneself and one's family; to support the interests of fellowship and social harmony (such as in receiving guests, or in activities of one's friends or relatives) or to support good works, such as community welfare projects
- not become an obsession, a cause for worry and anxiety; it should rather dealt with in a way leading to personal development.

In the context of the topic a Bodhisattva should be mentioned. The concept refers to anyone who has generated enlightenment-mind, a spontaneous wish to attain Buddhahood for the benefit of all sentient beings. The Bodhisattva can be a layman, including socially-oriented entrepreneurs, whose problems can be helpful on the way to enlightenment. The reversals motivate them to self-improve and to act flawlessly. Such an exemplar can be pursued following any profession but entrepreneurship is desirable in particular. Affluence brings peace of mind and makes charity able. Acquired income should be spent respecting the determinate proportion: 25% of income should cover current expenses and another 25% is supposed to be kept against „rainy day”. The rest should be invested. This approach of running business incentives to save money and accumulate capital (Karczewski, 2010, pp. 29-30). Nowadays there are also some specific entities on the economic scene – Buddhist enterprises. They have no particular legal form; an entity can be categorised as “Buddhist enterprise” if it meaningfully employs such Buddhist principles as care and compassion, non-violence, generosity, suffering minimisation, and want-reduction (Brown, Zsolnai, 2018, p. 502). Through their activity, such companies aim to promote sustainable development, natural environment protection, social inclusion, and development of social entrepreneurship (Table 2). Economic activity does not have the profit as the principal goal. Instead, its priority is to serve the community in a wider sense. Given its ethical foundation social enterprise seems to be a business form especially well-suited to Buddhists.

This term is used in different ways by various organisations and can be interpreted differently in various countries. Thus, there are many definitions of social entrepreneurship in the world of practice, but generally social enterprises are businesses set up primarily to benefit people and the planet. They have social or environmental missions, for example protecting an aspect of the environment, addressing social exclusion, improving employment or employability for a certain community, or providing affordable housing. They have taken the form of either not-for-profits and non-governmental organisations engaging in trade to support their activities, or of businesses looking after their employees' welfare. Furthermore, they have been additionally represented by the organisational forms, such as cooperatives and micro-credit institutions (Collavo, 2017, pp. 49-82). It seems that one can agree with C.R. Nunamaker (2014) who argues that such a form of business is in alignment with the Buddha's teachings insofar as it emphasises both profit and an ethical foundation. Commitment to a social mission, rather than maximising profits, can be perceived as a resolution not to exploit others. While the ethical foundation of social enterprise is generally understood to be committed to a social or environmental mission, there is nonetheless considerable scope for overlap with Buddhist values, such as compassion or mindfulness. In spite of this fact, equals sign cannot be put between social enterprise and the Buddhist one. As was mentioned, the latter does not exist as any particular legal form, and to be categorised as "Buddhist enterprise" suffice it to act employing Buddhist values. Profit may come, but it is a by-product rather than the main goal of business activities. Thus, the Buddhist enterprise is a broader notion than the social enterprise. The both types of companies exist in Buddhist and non-Buddhist countries alike. They can be also managed by Buddhists or non-Buddhists.

## **5. BUDDHISM IN BUSINESS – EXAMPLES OF GOOD PRACTISES**

The world view of Western societies reflects to a considerable extent the principles of so-called mainstream economics (Tomer, 2017). Thus, despite some corporations' pro-human or pro-environment public-relations activities, their fundamental purpose is not to meet genuine human needs but to generate profit. They cultivate values which seem to be the opposite what Buddhism promotes (attachment, delusion or pride). The contrast between mainstream economics and Buddhist economics can be illustrated as set of rules in opposition (Table 2). The practices are described in the last column of the Table, whereas the previous one includes explanation of Buddhists rules in the context of business. Such juxtaposition of the content provides arguments why the companies mentioned below can be categorised as the Buddhist ones.

*Table following on the next page*

*Table 2: Principles of the Buddhist economics as the opposition to Western economic mindset (own compilation on the basis of Zsolnai, 2016 and the sources mentioned below )*

<b>Buddhist economics vs mainstream Western economics</b>	<b>Explanation of the Buddhist rules</b>	<b>Examples of activities</b>
Minimising suffering instead of profit-maximisation	The suffering-minimising principle can be formulated to reveal that the goal of economic activities is to decrease losses (not interpreted only in monetary terms or applied only to humans).	Greyston Bakery open-hiring policy: hiring anyone willing to work including people with histories of homelessness, incarceration, substance abuse, welfare dependence, domestic violence or illiteracy (Greystone Bakery, 2019).  The foundation of Patagonia involves the production of equipment for climbers which eliminates harmful effects on the rock surfaces it was used on ( DeLeon, 2018).
Simplify in g. desires instead of cultivating desires	Wanting less could bring benefits for the person, for the community, and for nature as a whole.	Patagonia launched (2011) the “Common Threads” initiative, urging consumers to send back well-worn clothing to be repaired and refurbished, and simultaneously took out an ad page on Black Friday in order to persuade people to not buy anything they do not need (Simon, 2012).
Minimise violence instead of introducing markets.	Non-violence prevents doing actions that cause suffering for oneself or others and urges participative and communicative solutions.	The community economy models based on partial or complete self-reliance, i.e.: Local Food Plus Community (2005-2014) created “certified” farmers i. a. in Ontario and the Canadian Prairies who used sustainable practices, and helped connect farmers and buyers, in part through a “Buy to Vote” campaign, based on the notion of voting with one’s money (Campbell and MacRae, 2013).
Genuine care instead of instrumental use of the world.	Caring organisations are rewarded for the higher costs of their socially responsible behavior by their ability to form commitments among owners, managers and employees (i.a. avoiding opportunistic behaviour, willingness to work more for lower salaries) and to establish trust relationships with customers and subcontractors.	Japan Airlines: in 2010 Kazuko Inamori took the chief executive role without pay and printed a small book for each staff member on his philosophies, which declared that the company was devoted to their growth. He also explained the social significance of their work and outlined Buddhist-inspired principles for how employees should live. This made them proud of the airline and ready to work harder. The next year, he returned the carrier to profit and led it out of bankruptcy. In 2012 he relisted it on the Tokyo stock exchange (Redmond and Taniguchi, 2015)
Generosity instead of self-interest-based ethics	Generosity might work in business and social life because people behave like “Homo reciprocans”, not like homo oeconomicus (they tend to reciprocate what they get and give back more than they received).	As far back as 1986, Patagonia began donating 1% of its sales to grassroots organisations (“Earth Tax”) (Patagonia, 2015) and recently it was giving back \$10 million in tax cuts to these organisations (Willingham, 2018).  Working as volunteers for Sarvodaya (2018) – Sri Lanka's Sarvodaya Shramadana Movement, Omidyar Network (2019) and any other organisations.

Table 2 includes a mixture of cases and some of them are worth to be widely commented. The first one, the worldwide clothing company Patagonia based in California, grew out of a small business entity. In 1964, Yvon Chouinard set up with Tom Frost a company specialising in high-grade pitons for climbers, but the former discovered presently that these spikes had harmful effects on the rock surfaces. Upon this realisation, Chouinard pulled out of that business and worked toward building a better alternative. His new solution, lightweight aluminum nuts, began a movement called “clean climbing,” raising awareness about how climbers could take better care of the environment. This era saw the beginnings of Patagonia. In the ’80s, the company explored more sustainable materials and methods of production, including organic

cotton, hemp, and polyethylene terephthalate, or PET. They discovered a process by which they could recycle 25 plastic bottles into one fleece product (Patagonia 2019, DeLeon, 2018, Wang, 2010). Patagonia has used its platform to raise awareness and advocacy for environmental issues (Patagonia Action Works, 2019). In just the last few years alone, the company has expanded its used clothing program, amped up its investment in sustainable startups, launched an activist hub to connect its customer base directly with grassroots environmental organisations (Beer, 2018). Greyston Bakery, the \$10 million for-profit bakery is most famous for its long-standing status as brownie supplier and for having an open-hiring policy. In 1982, Bernie Glassman, a Zen Buddhism teacher, along with the Zen Community of New York opened a bakery café as a way to employ his students. The café successfully supported the staff, but Bernie's beliefs drew him to community development and work with the homeless and unemployed. They moved the business to Yonkers (the place with the highest per capita homeless population in the country at the time) and called it Greyston Bakery. After several years, the community began hiring people from the neighborhood. Glassman and his wife envisioned a non-profit organisation that would offer housing, jobs, social services, child care, and HIV-related health care. This was the beginning of Greyston's community-based programming. In the mid-1990s, Glassman left Yonkers to pursue other endeavors, but with the solid foundation Greyston continues to thrive (Greystone Bakery, 2019). Committed to a Triple Bottom Line (prioritising profits, social contributions and environmental impact) (Slaper and Hall, 2011), the Bakery continues to be a pioneer in the world of social enterprise. All of its profits go to the Foundation, which operates several self-sufficiency programs in Yonkers. In 2008, the bakery became a certified B Corp as part of B Lab's movement and went on to become the first state registered Benefit Corporation in New York a few years later. Certified B Corporations are a kind of business that balances purpose and profit. They are legally required to consider the impact of their decisions on their workers, customers, suppliers, community, and the environment (Certified B Corporations, 2019). Kazuo Inamori, founder and chairman emeritus of Kyocera Corp has used Buddhist philosophy to establish this electronics giant more than five decades ago, created the \$90 billion phone carrier now known as KDDI Corp, and rescued Japan Airlines from its 2010 bankruptcy. Inamori is known for believing that taking care of a company's employees and making sure they are happy (both materially and intellectually) is the most important aspect of business management. If staff are happy, they will work better and earnings will improve. In the context of running business Inamori claims: "If you want eggs, take care of the hen. If you bully or kill the hen, it's not going to work (...). Companies do belong to shareholders, but hundreds or thousands of employees are also involved. The hen has to be healthy." Equally, companies should not be ashamed to make profits if they are pursued in a way that benefits society<sup>2</sup>. The practises described above and in Table 2 show that Buddhist economics can be beneficial to their milieu. It is undeniable that acting according to the Buddhist rules also is financially rewarding. Obviously appropriation of profits depends on the form of the enterprise (for instance, a social enterprise or a corporation).

## 6. CONCLUSION

Buddhist economics is best viewed as an alternative strategy, which can be applied in a variety of economic context. The goal of Buddhist economics is to achieve an economy that creates

<sup>2</sup> Some other examples of Buddhist business leaders can be given, as: Pierre Omidyar (the author of the code and web page of eBay. He became a billionaire – though is no longer CEO of the company but operates the Omidyar Network – a philanthropic investment firm designed to harness the power of markets to create opportunity for people to improve their lives), Christine Comaford (throughout the course of her career, i.a. she has served on the board of advisors or directors at more than 36 start-ups, while also being an angel investor or venture capitalist for over 200) or Jack Ma Yun (the co-founder and executive chairman of the Chinese conglomerate Alibaba; Ma claims his business life has been dedicated to improving the circumstances of those within China, and he's said in the past he hopes to lift at least 300 million out of poverty). (Todd, 2018).

shared prosperity in a sustainable world with reduced environmental suffering. Participation and engagement of business in sustainable shared prosperity is crucial for making progress toward a Buddhist economy because business is probably the most powerful player in every economy. Mainstream businesses usually represent values which are the exact opposite what Buddhism promotes. Thus, deep institutional changes which redefine the roles and duties of business would be required. Buddhism does not prohibit material wealth, it only reminds us not to become attached to material possessions, and to share our wealth with others. Examples of Patagonia or Greyston Bakery lead to awareness that economic activity can be means to a good and noble life. Patagonia makes considerable efforts to reduce the root causes of climate change whereas the Bakery operates self-sufficiency programs in Yonkers. Bernard Glassman, was inspired by Buddhist principles to establish a business that would “reduce human suffering”. The suffering-minimising principle has been noticeably implemented into the companies activity. One may say that Buddhist economics may help Buddhists and non-Buddhists alike to create sustainable livelihood solutions which aim to reduce suffering of human and non-human beings by practicing want negation, non-violence, caring and generosity based on the liberating insight of the Buddha, the no-self.

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# GREEN MARKETING AND CORPORATE SOCIAL RESPONSIBILITY AS THE DETERMINANT OF CREATING A SEGMENT OF GREEN CONSUMERS

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## **ABSTRACT**

*Green marketing aims to achieve activities that will promote products and services that have minimal impact on the environment and society as a whole, with the creation of high quality images as well as the development of consumer awareness and change of attitudes and lifestyle. Consumer needs as well as their attitudes and opinions affect demand for organic products. Developed ecological awareness, environmental care and preservation, sustainable development, health care, the desire to consume quality products of ecologically grown, lifestyle and more are just some of the reasons that affect the demand for these products. The product certification confirms the traceability of obtaining products without harmful ingredients, and the eco-mark differentiates and places these products in consumer consciousness. One of the limiting factors is slightly less representation in consumption or demand is their slightly higher price than conventional crop products. As a follow-up, a segment called "green consumers" who benefit non-adverse environmental performance, using as little resources as possible, energy, having as many recycled components as possible, do not endanger their health and the health of others, does not include animal testing and others that will satisfy their needs and desires in all phases of the decision-making process as well as the post buying valuation. The paper presents the results of research on the impact of green marketing and socially responsible business organizations on the creation of green consumers, their consumer habits, familiarity with the ecological label, ecologically acceptable products and the concept of socially responsible business organizations that have positive effects on their society and the environment through their business processes.*

**Keywords:** *green marketing, green consumer, social responsibility*

## **1. INTRODUCTION**

Social marketing implies the usage of marketing in the process of realization of social goals that, as an essential or even derived starting point, do not primarily have profit but rather fulfilment of needs of welfare, that is, social character (Meler, 1994; p. 42). Marketing is present in every business relationship, thus making the socially responsible business activity its component, because it is not only profit what is expected from an economic operator but also a responsible relationship towards the environment, as well as involvement of other economic operators present on the market, workers of the company itself and the community where the company conducts business. The company has numerous stakeholders to take care of when defining ethically correct business policy, which includes workers, consumers, suppliers and wider social community. The moral obligation of doing the right things, sustainability focused on taking care of the social dimension and the environment, reputation in the sense of the company's image, trade mark and name values, and, finally, the values of the company itself

are guidelines for socially responsible business activity. A company's social responsibility together with the social responsibility of every individual is in taking actions to protect and improve the well-being of the society as a whole, while fulfilling its own interests at the same time. Within the framework of social marketing and through activities of green marketing, all activities connected with product and service promotion are being carried out; taking into account the influence and actions, they can have on the environment and the society itself. Therefore, the segment of green consumers with developed environmental awareness, consumers who care for the environment and its preservation, sustainable development and other, i.e., the ones who support social goals by consuming green products is being developed.

## **2. THE SEGMENT OF GREEN CONSUMERS AS THE TARGET MARKET OF GREEN MARKETING**

Green marketing is studying the positive and negative aspects of marketing activities on contamination, energy depletion and non-energy resources depletion (Tolušić, Dumančić, Bogdan, 2014; p. 26). Green marketing activities are focused on creating a brand image of quality taking into account the characteristics of the product but also the activities of the product's producer in relation with environmental protection as well as the development of the product that will fulfill the consumers' needs for quality, characteristics and price with minimal adverse effects to the environment. Green marketing implies activities related to reduced use of natural resources and reduced energy consumption in the production process and other business processes, reuse of the packaging or its components and recycling, i.e., organized collection of used products or their packaging for the recycling procedure (according to Ham, Forjan 2009; p. 215). Environmentalism is an organized movement of citizens and government agencies for protection and improvement of the living environment. Environmentalists strive that environmentalistic costs become included in decision making of producers and consumers (Rakić, 2002; p. 66). A target market consists of a group of consumers with equal needs or characteristics that will react in the same or similar way to the marketing activities of the economic operator (Grbac, 2005; p. 262). In green marketing, the target market are green consumers whose lifestyle is consumption of products that do not have adverse effects on their health and the health of their loved ones, that have not been not tested on animals and do not have an adverse effect on their environment, to whom sustainability is important and who are willing to pay more for organic products. The purchasing power of green consumers and their lifestyle, i.e., their needs and wishes, are important as the target market of companies in order for them to be able to fulfill the needs and wishes of their customers, and provide all the necessary information about the product itself within the framework of green marketing. The trend of healthy diet and consumer awareness about the mutual connection of diet and health impacts the demand, i.e., consumption of so-called healthy food that is organic but also that which contains less fat, sugar and other ingredients that have an impact on health. Attitude towards personal health and diet also affects consumption of these kinds of products. The "eco product" label confirms traceability of obtaining the product without adverse ingredients, and the eco label itself differentiates and positions these products in the consumers awareness. The Ministry of Environmental Protection and Energy in the Republic of Croatia is competent for two labels:

1. The "Priatelj okoliša" ("Environmentally Friendly") label that confirms that a certain product in comparison with similar products and services is characterized by reduced adverse effect on the environment in a complete life cycle and thus contributes to more efficient usage of the environment components and high-degree environmental protection.
2. The EU Ecolabel awarded to products and services supplied for distribution, consumption or use on the European Community market. The goal of this eco label is to reduce adverse

effects of consumption and production on the environment, health, climate, resource and energy consumption, and to encourage responsible behavior towards the environment.<sup>1</sup>

Through the concept of socially responsible business activity and implementation of green marketing, companies differentiate their products and services on the competitive market, and it is precisely through green marketing that they can achieve competitive advantage on the local but also on the global markets and fulfill all needs and wishes of their green consumers as well as influence those consumers who are not yet green, i.e., raise awareness about the environment protection, health concern and sustainability of the living environment with the activities of green marketing.

### **3. THE CONCEPT OF SUSTAINABLE DEVELOPMENT THROUGH PRINCIPLES OF GREEN MARKETING AND GREEN CONSUMERS**

Sustainable development and sustainable consumption along with the protection of living environment include, among other things, the questions of fulfilling the needs of consumers, quality-of-life and efficiency improvement, adjustment of technology to the production processes that do not contaminate the living environment, renewable energy use, all supported by government incentive measures for sustainability. In addition to government measures, campaigns for the development of consumer awareness also play a significant role on using those kinds of products and services. Individual campaigns are focused on the identified target group of consumers through implementation of a corresponding marketing strategy in order to identify activities involving product modification, production process, packaging or promotion methods. This is how the target consumer is identified and evaluated, and the degree of his/her awareness as well as the need for additional education is determined. The primary goal of the living environment protection marketing is to influence the consumer behavior and his/her willingness to pay more for products that are environmentally sound and responsible. Raising awareness and its development in different forms of education and informative programs about the benefits of organic products affects attitudes and lifestyle changes in all segments of the society. Lifestyle is the way a person lives, i.e., the way one uses time, what is significant to that person, what are his/her interests and opinions. Attitudes are often explained in such way that they have formed as the result of one's socialization inside the groups to which he/she belongs, such as family, friends or social groups, and those are precisely the types of information that help to position the product on the market. Quality-of-life marketing is a specific business philosophy and a strategic orientation that, in the decision-making process and execution of a marketing concept, starts from the principles of ethics and social responsibility, as well as the theory about interest and influence groups (Lončarić, 2010; p. 210-224). Quality-of-life marketing represents the expansion of the social conception of marketing, which manifests itself through:

1. Quality-of-life marketing, as well as the social conception of marketing, emphasizes the well-being of consumers by delivering satisfaction, but that connection is more expressed in the former in the sense of long-term orientation, since it is not possible to significantly improve the well-being of consumers during a short period of time.
2. Socially responsible marketing sees the competition traditionally, emphasizing a more efficient fulfillment of needs compared to the competition (Sirgy, 1996; p. 22).
3. Quality-of-life marketing can be defined as a special form of contemplating and conducting business activities regarding production, delivery and consumption of products, services, ideas and programs, their promotion and pricing, that contributes to the long-term improvement of living conditions in a certain environment while achieving a satisfactory

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<sup>1</sup> <https://www.mzoip.hr/hr/okolis/eko-oznake.html>

level of contentment of the target and other interest groups and minimizing any adverse side-effects (Lončarić, 2003; p. 96).

The fundamental sense of the theory and practice of marketing corresponding to the quality-of-life philosophy is contained in the following: quality-of-life marketing starts from the assumption that the company's task is to develop products, services and programs that can improve the well-being of consumers and deliver those products in a way that will reduce accompanying adverse effects to minimum for users, as well as other audience, while creating a long-term profit (Sirgy, 1996; p. 21). In promoting sustainable social development, every individual is important, and ensuring the conditions for its individual development in accordance with personal wishes and possibilities represents the necessary condition for balanced development. The quality-of-life concept refers to the overall well-being of the society, and it is focused on enabling every member of the society to achieve his/her goals and it is thus measured not only through economic but also through non-economic indicators (indicators of material living standard, as well as different subjective factors that affect human life, such as: social relations, security, mental health, quality of the natural environment, leisure, cultural resources and other indicators).

#### **4. CHANGE OF CONSUMER ATTITUDES AND BEHAVIOR TOWARDS BECOMING GREEN CONSUMERS**

The goal of persuasiveness is a change of attitude as a result of communication appeal activity on cognitive or affective parts of consumer's awareness depending on the degrees of high or low involvement of the individual. Influences on attitude change take place by affecting the cognitive component of an attitude via a communication source and message content, and the affective (emotional) component. The degree of emotional investment increases with emotional appeals that are processed on a general level, i.e., by holistic approach. Feelings play a key role in attitude change in certain situations. The goal of persuasion is a change of attitude or behavior as a result of communication appeal activity on the cognitive or the affective parts of the consumer's awareness. Learning process theory explains the impacts of persuasion on consumer (service user) behavior (Kesić, 2003; p. 146). Attitude is a psychological variable that cannot be felt or seen, and within the framework of attitudes, three components are researched: cognitive, affective and conative. They form as a result of individual's socialization, and they are the concept of thought structures, knowledge, beliefs, values etc. The techniques of influencing consumer engagement level lie in powerful advertising appeals (ideas) that send the message strongly and originally and which make the organization/products recognizable to both consumers and non-consumers. The primary task of advertising appeals, i.e., promotional theme or idea is to direct the content of the promotional message to activation of one or more consumer motives. Advertising appeals are usually divided into two groups: positive appeal and negative appeal. Positive appeal basically points out the benefit the buyer will achieve by using socially responsible products. Negative appeals emphasize the damage, the unpleasantness that will be avoided by purchasing and using the product of sustainable consumption. By emphasizing the fear, marketers expect a higher degree of consumer awareness about the importance and significance of the living environment through consumption. The needs of green consumers from which the behavior derives are: the need for control, the need for achieving the change, the need for information, the need for lifestyle maintaining (Ottman, 1998; p. 31-43).

## 5. RESEARCH RESULTS

From 20 to 26 March 2019, 103 respondents (students) of undergraduate professional studies from the College of Applied Sciences “Lavoslav Ružička” in Vukovar participated in a survey via a questionnaire regarding the impact of green marketing and socially responsible business activity on green consumer creation, consumer habits, level of familiarity with eco labels and environmentally friendly products. 62% of the respondents were women and 38% were men. 93% of full-time and 7% of part-time students from 18 to 24 years (98%) and from 25 to 30 years (2%) participated in the research, 19% of which were from the Undergraduate Professional Study of Commerce, 23% from the Undergraduate Professional Study of Administration and 58% from the Undergraduate Professional Study of Physiotherapy. To the question Are you familiar with the term ‘green marketing’?, 67% of respondents said they were familiar with the term, while 33% of them were not familiar with the term of green marketing. The answer structure is shown in Figure 1.

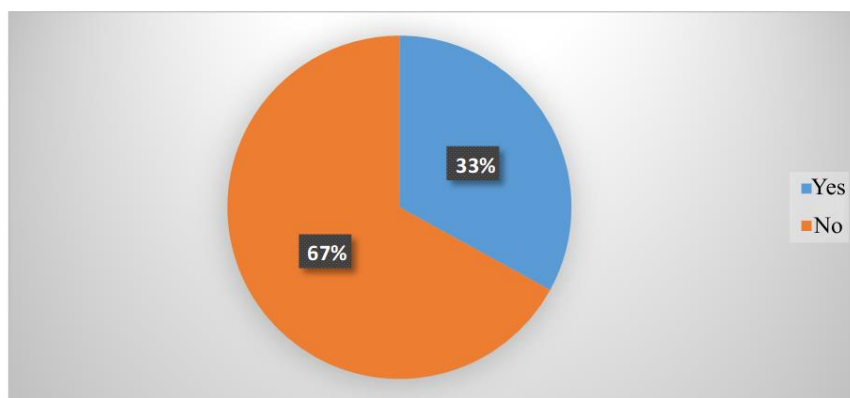


Figure 1: Familiarity with the term ‘green marketing’

When asked *Do you recycle and how often?*, 66% of respondents said they sometimes recycled, 14% of respondents always recycled and 20% of respondents did not recycle. The answer structure is shown in Figure 2.

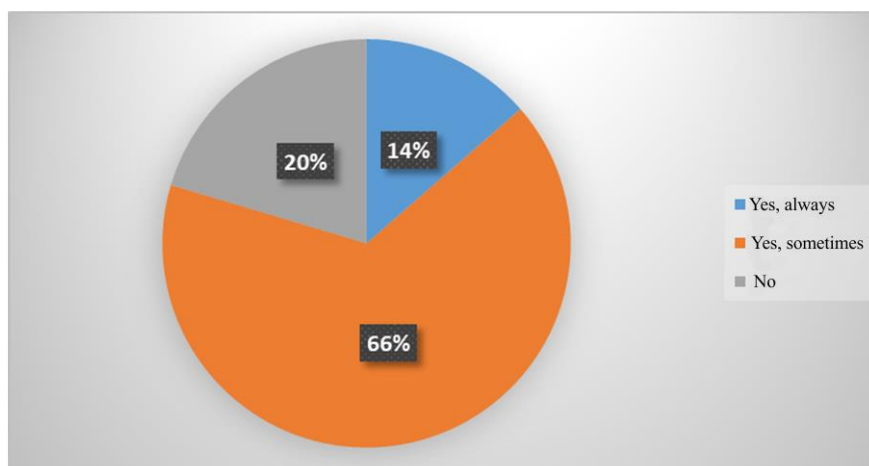
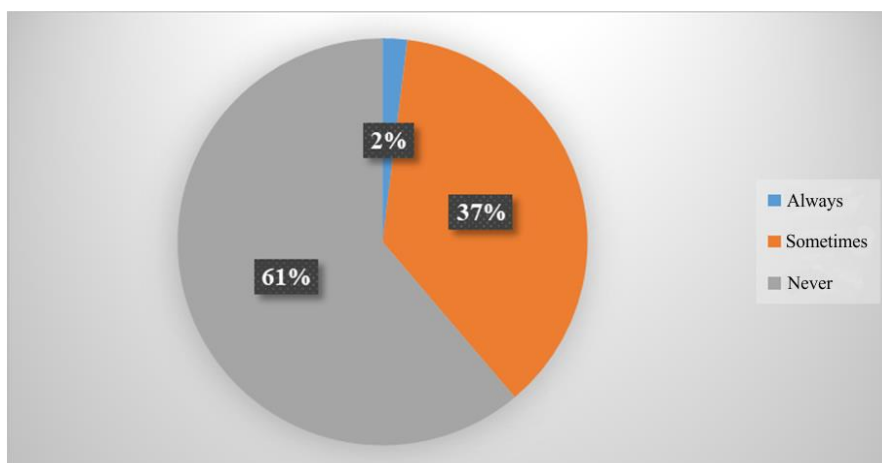


Figure 2: Frequency of waste recycling

When purchasing products, only 2% of the respondents always paid attention to the environmental labels on products, 37% of them sometimes paid attention, and 61% of respondents never paid attention to environmental labels on products.



*Figure 3: Environmental labels on products*

Further in the questionnaire, 6 statements were given to which the respondents reported their degree of agreement/disagreement on a scale from 1 to 5, where 1 meant 'completely disagree' and 5 meant 'completely agree' with a statement. The answer structure for the statements is shown in Table 1.

*Table following on the next page*

*Table 1: Agreement/disagreement with the statements*

Statements	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
I think about environmental problems and what I, as an individual, can do concerning ecology.	8.74%	21.36%	45.63%	18.45%	5.83%
I can contribute to solving and mitigating said environmental problems such as deforestation and water and environment contamination with my behavior.	7.77%	12.62%	30.10%	28.16%	21.36%
Habits and values of my family have affected my care for the environment.	6.80%	8.74%	32.04%	36.89%	15.53%
I think about the environment related questions while purchasing and using products.	32.04%	28.16%	29.13%	8.74%	1.94%
I will buy a product in an environmental packaging even though it is more expensive than a product of the same quality and quantity in a non-environmental packaging.	35.92%	32.04%	27.18%	2.91%	1.94%
The “Prijatelj okoliša” (“Environmentally Friendly”) label is intended for all products good for the environment.	8.74%	7.77%	23.30%	25.24%	34.95%
I buy products with eco labels.	31.07%	35.92%	23.30%	7.77%	1.94%
I participate in green actions and support them.	39.81%	24.27%	31.07%	3.88%	0.97%
Promotional messages influenced the choice of product safe for the environment.	18.45%	25.24%	36.89%	15.53%	3.88%
Socially responsible business activity of the company has led me to thinking and changing of my habits related to buying products that do not have adverse effects on the environment.	22.33%	31.07%	33.01%	10.68%	2.91%
I am changing my attitudes and consumer habits because I am motivated by the desire to protect myself, my family members and my loved ones in the environment I live in.	13.59%	17.48%	38.83%	19.42%	10.68%
The media affect my attitudes and change of behavior concerning purchasing and consumption of environmentally acceptable products by product and service promotion.	13.59%	20.39%	39.81%	20.39%	5.83%
Awareness about environmentally acceptable products will prompt me to buy them.	13.59%	11.65%	36.89%	23.30%	14.56%

*Table 1: Agreement/disagreement with the statements*

From the table above it can be seen that 45.63% of the respondents are indifferent (they neither agree nor disagree) and do not think about environmental problems and what an individual can do concerning ecology, while 24.28% of them agree or completely agree with the said statement. 49.52% of the respondents agree or completely agree with the statement that they can contribute to solving and mitigating the said environmental problems such as deforestation, and water and environment contamination with their behavior.

52.42% of respondents said they agreed with the statement Habits and values of my family have affected my care for the environment. Less than 10% of respondents agree with the statements related to eco labels during product purchase, as well as the questions about the impact of the product on the environment. 3.76% of the respondents participate and support green actions. 30.10% of respondents change their attitudes and consumers habits because they are motivated by the desire to protect themselves, their family members and their loved ones in the environment they live in, and 26.22% said they are influenced by media promotion of green products and services. 37.86% of respondents agree with the statement that awareness about environmentally acceptable products will encourage them to buy those products. On a statement The biggest influence on my attitude change on consumption and use of eco products with “Priatelj okoliša” (“Environmentally friendly”) label; respondents gave the following answers: family with 36%, next are social network promotions with 34%, circle of friends and acquaintances with 14%, promotional messages of green marketing with 12% and magazines with 4%. The answer structure is shown in Figure 4.

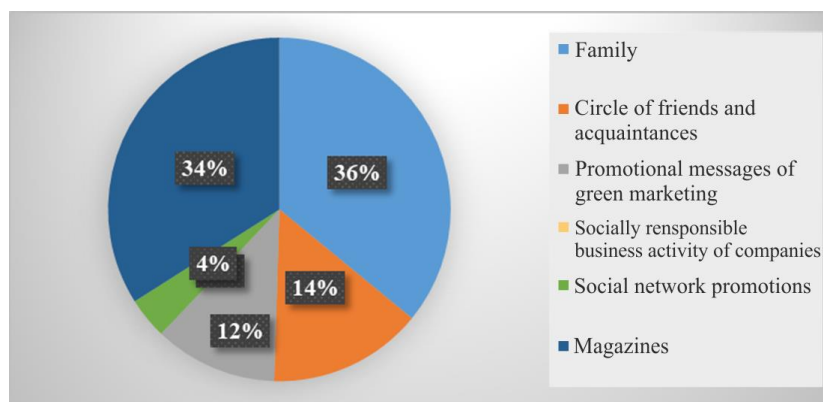


Figure 4: Influence on consumption and use of eco products and products with the “Priatelj okoliša” (“Environmentally friendly”) label

## 6. CONCLUSION

Attitudes form as a result of individual's socialization. They are concepts of thought structures, knowledge, beliefs, values etc., and they reflect positive or negative tendencies, the feeling that one should take action for or against different situations and objects. Family, as the unit that transfers a culture and social values to an individual, is the source of influences on creation of attitudes and beliefs. Socialization of family members, i.e., socialization of future consumers, represents the process of acquisition of knowledge, skills and attitudes for them to function as consumers. Other than family, close friends, personal experience, direct marketing and mass media also influence the creation of attitudes. In the conducted survey, which included the age group from 28 to 24 years (98%) and the age group from 25 to 30 years (2%), this fact was confirmed because 52.42% of respondents agreed with the statement Habits and values of my family have affected my care for the environment, and that their families influenced their consumption and use of eco products and products with the “Priatelj okoliša” (“Environmentally friendly”) label the most (36%), followed by social network advertising (34%) and their circles of friends and acquaintances (14%). Since this is a younger age group that believes it can contribute to solving and mitigating the said environmental problems with their responsible behavior, that the media can influence their attitudes and change of behavior, i.e., awareness, that with the use of direct marketing programs one can influence the fulfillment of specific interests and lifestyles within the framework of green marketing and thus fulfill the needs of a certain segment of both current and future consumers. It is necessary to place emphasis on consumers' conformism with respect to reference groups in terms of their adoption

of reference group attitudes, behavior and norms that will raise an individual's awareness, encourage him/her to think, adopt attitudes, behavior and use products that are in accordance with the reference group and whose interest is environmental preservation and sustainability.

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## THE CONTRIBUTION OF MANUFACTURING SECTOR TO ECONOMIC GROWTH (1981-2015)

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### **ABSTRACT**

*The study investigates the contribution of manufacturing sector to economic growth in Nigeria. Secondary data sourced from statistical bulletin of Central Bank of Nigeria (CBN) and World Development Index (WDI) spanning from 1981 – 2015 was collected and analyzed using Auto Regressive Distributed Lag. The result showed that a 1% increase in MO will increase GDP by 0.28 percent which is very low. Moreover, the bound test base on F – statistic revealed that there is no co-integration relationship between GDP and MO. Based on the result, it is suggested that government should continue to intensify more effort to improve the performance of the manufacturing sector.*

**Keywords:** *Manufacturing, Auto-Regressive, Co-integration*

### **1. INTRODUCTION**

The effect of manufacturing on economic development has been broadly studied. Very few countries have been able to grow and accumulate wealth without investing in their manufacturing industries, and a strong and thriving manufacturing sector usually precipitates industrialization. The manufacturing sector is widely considered to be the ideal industry to drive Africa's development. This is due to the labor-intensive, export focused nature of the industry. There is a direct correlation between exportation levels and the economic success of a country. By increasingly adding value to products before they are sold, revenues are boosted, thereby raising average earnings per input. Furthermore, the manufacturing sector is also more sustainable and less vulnerable to external shocks than commodities (KPMG, 2014). Industrial development therefore is the application of modern technology, equipments and machineries for the production of goods and services, alleviating human suffering and to ensure continuous improvement in their welfare. Modern manufacturing processes are characterized by high technological innovations, the development of managerial and entrepreneurial talents and improvement in technical skills which normally promote productivity and better living conditions. In recognition of this, successive governments in Nigeria have continued to articulate policy measures and programme to achieve industrial growth and development. This cannot be attained until manufacturing capacity is utilized to a reasonable extent (Fashola, 2004). The World Bank has classified Nigeria as inward oriented by trade orientation. Using data for 1963 – 73 and 1973 – 1985, she was deemed moderately inward oriented for the production period 1963 – 1973, but strongly inward oriented for the period 1973 – 1985. Since 2001, Nigeria has enjoyed a long period of sustained expansion of the non-oil economy, with growth occurring across all sectors of the economy and accelerating at about 7%. This growth rate increased to about 8-9% in 2003 despite the financial crisis. This has more than doubled the growth rate in the country prior to 1999. Even in the wake of the global financial crisis in 2009, Nigeria's growth performance fell only to about 4.5 percent. This, according to Ajakaiye and Fakiyesi (2009) has been attributed to the rapid growth rate in the non-oil export. In spite of the country's vast oil wealth, the World Bank Development Indicators (2012) has shown that majority of Nigerians are poor with 84.5 per cent of the population living on less than two dollar a day. The United Nations Human Development Index (2011) also ranks Nigeria 156 out of 179 countries, which is a significant decrease in its human development ranking of 151 in 2004;

and World Bank Development Indicators (2012) have placed Nigeria within the 47 poorest countries of the world. The issue of poverty can be easily traced to mono-economic practice and underutilization of the nation's endowed resources, especially in manufacturing sector, which could have opened up windows of opportunity in job creation and economic development. The history of industrial development and manufacturing in Nigeria is a classic illustration of how a nation could neglect a vital sector through policy inconsistencies and distractions attributable to the discovery of oil (Adeola, 2005). However, Ogbu (2012) argues that the country's oil industry is not a major source of employment, and its benefit to the other sectors in the economy is limited since the government has not adequately developed the capacity to pursue the more value-added activities of the petrochemical value chain. As a result, the oil industry does not allow for any agglomeration or technological spillover effects, Ogbu (2012) stresses. Currently, Nigeria's manufacturing sector's share in the Gross Domestic Product (GDP) remains minuscule (CBN, 2011). Compare that to the strong manufacturing sectors in other emerging economies, where structural change has already occurred and where millions have been lifted out of poverty as a result: manufacturing contributes 20 percent of GDP in Brazil, 34 percent in China, 30 percent in Malaysia, 35 percent in Thailand and 28 percent in Indonesia (Ogbu, 2012). Although industrialization (with special emphasis on manufacturing) is vital in the process of economic development, its performance in Nigeria has not been quite impressive. Two main strategies have been put in place to correct this anomaly. The first is the import substitution strategy while the second is the export promotion strategy. The second strategy, which has been in vogue since the adoption of the SAP in Nigeria in mid – 1986, emphasizes the promotion of value – added non-oil exports, especially manufactures, and did not actually achieved significant results (Uniamikogbo, 1996). Generally, the manufacturing sector which plays a catalytic role in a modern economy has many dynamic benefits crucial for economic transformation is a leading sector in many aspects (Oguma, 1995) says it creates investment capital at a faster rate than any other sector of the economy. Available evidence showed that the share of manufacturing value in the Gross Domestic Product (GDP) was 3.2% in 1960. In 1977, its share of GDP increased to 5.4% and in 1992 grew to 13%. The share of the manufacturing in GDP fell to 6.2 in 1993, while overall manufacturing capacity utilization rate fluctuated downwards to 2.4% in 1998 (Chete and Adewuyi, 2004).

### **1.1. Statement of the Problem**

In 2003, the manufacturing sector accounted for 4% of the Gross Domestic Product (GDP) (Tamuno&Edoumiekumo, 2012). A country is industrialized when at least one-quarter of its Gross Domestic Product(GDP) is produced in its industrial output arises in the manufacturing section of industrial sectors, and when at least one tenth of its total population is employed in the industrial sectors of the economy. The manufacturing sector is to be dominant in terms of contribution to the Gross Domestic Product of any economy especially that of Nigeria (Ayodele&Falokun, 2003). An industrial sector that does not contribute at least one-quarter of the country's GDP is widely viewed as a major challenge enhancing a country's economic growth. Nigerian manufacturing sector is faced with capacity under utilization and this has posed a threat to the economic growth and development of the country. (Adewale, 2002). However, the greatest obstacle to rapid industrial development in Nigeria has been identified to be; inadequate finance. Abdulkadir, (1984) pointedly puts it that "if the country's industrial aspirations are to be achieved, the provision of adequate finance should be accorded high priority. But regrettably, Nigerian industrialists have been badly starved of this very important ingredient for both the establishment and maintenance of industries and could be evidently seen in the following areas; Inadequate initial capital for take off, inadequate funds for maintaining existing industries, insufficient funds for expansion. The lack of funds and enabling environment for industrialists has greatly denied the nation the capacity of achieving significant

industrial growth or industrialization which Nigeria has always hoped and craved for. Considering the enormous importance attached to industrialization in our economic growth, any problem militating against its achievement should be of interest to us. We strive to determine to what extent that industrial development have contributed to our economic growth (Dauda, 2006). A question is now being posed that “How can Nigeria economy achieve economic growth from agricultural based economy to industrialized economy”

## **2. LITERATURE REVIEW**

### **2.1. Conceptual literature review**

Chenery (1960) suggested a stable arrangement of industrial sector improvement. He believed that, as industrial sector development continues, changes are generally noticed in economic structures. An increase in the relative importance of the industrial sector leads to changes in the production methods and sources of supply for industrial produces. Tamuno and Edoumiekumo (2012) determined production functions using constant substitution of electricity to the Nigerian industrial sector which was centered on a study of the industrial sector from 1962-1975 and discovered that labor and capital have a positive relationship and are also of economic and political importance. They also found that the substitution level in the Nigerian industrial sector is very low. Globalization can also be shown to be of great importance to the modern process of industrialization of many countries in recent times. Looking at Nigeria, globalization can play a major role in the privatization and commercialization of industries which simply means the transfer of government ownership to private ownership. Such ownership could be full (privatization) or partial (commercialization) (FRN, 1988). That is to say, that the government role is limited to that of maintaining basic law and order. The policies of 1989 were, in the main, accepted as a replacement for the earlier indigenization policies of 1977 that promoted international investments and gave room for local businesses to gain from the National Economic Reconstruction Fund (NERF). Nevertheless, the careful revaluation of the many published papers on the effects of globalization remains of importance. Akinbola (2001) believes that the method of globalization which involves the increment of resources and market forces into an unregulated environment results in an unfavorable socio-economic situation for the common people. Using Nigeria as an example, the acceptance of the World Trade Organization (WTO) treaty seriously neglected the fall in the standard of living of the people and aggravated the failure in important sectors of the economy. Structural failure reduced the opportunities for increasing capacity utilization. Clunies-Ross et al., (2010) state that the industrial growth, or basically industrialization, has two different meanings. It can be perceived as a change in a country's form of production and work force towards producing or minor industries. Relating it to income levels, on this basis nations can be grouped into different income levels (high-income, higher upper income, lower upper income, higher middle income, lowers middle income and the low income countries). This is a larger element of industrialization. There are works relating to industrial development and economic growth. Blomstrom et al., (1994) suggest that industrial development through foreign investors can have a positive influence on economic growth level. They claimed that the industrial development contribution to economic growth level is dependent upon a critical minimum level of income. Below this level the contribution of industries to economic growth is insignificant and above this level, it is significant. The reason given is that, countries that have attained certain level of income are those that can benefit efficiently from the experience of those overseas industries and foreign stakeholders with which they come in contact. Arthur Lewis (1995) in his dual-sector model expresses his view of economic growth and development within the context of the classical framework with its assumption of unlimited labor supply as the driver of economic development. He believes that the classical model is more applicable for the analysis of the less developed economies.

## 2.2. Theoretical literature review

### 2.2.1. The Lewis Model of Development

The Lewis model is known for the two sector economy concept (a rural, agricultural and traditional sector and an urban, industrial and capitalist sector). In the agricultural and traditional sector the population is very high in relation to production output and the natural resources available and the (MPL) marginal productivity of labour in the traditional sector is very low or zero. This means that there is unemployment or under-employment. This is seen as a reservoir of labour supply to the industrial sector. This labour can be reduced without reducing output. Moreover there are factors that support an adequate supply of labour; high population growth as a result of low mortality and high birth rate, the daughters and wives released from domestic work, and workers from different types of casual jobs and the unemployment created by increasing efficiency. Hence, labour supply will exceed demand. At that juncture, the labour market will be in favour of capitalists, and capitalists can maintain a constant wage. Lewis (1995) believes that the supply of labour is effectively unlimited on the basis that the capitalist can have a reliable supply of labour at the same wage. The level of wages in the industrial sector is determined by that in the rural sector. However, if the wage in the industrial sector is less than that in the rural sector, no peasant will leave the rural sector to find a job in the industrial or urban sector. According to Lewis, the urban wage is about 30% more than rural wage. This gap is seen necessary to prompt the change from the rural sector to compensate for the higher cost of living in an urban area or the mental cost of transfer. As the marginal product of labour is insignificant or zero, the wages in the rural sector remain unchanged at a subsistence level. Thus, the wages in the urban sector also remains unchanged. Even if it is greater than the earnings in the rural sector because of a little encouragement, it is no more than rural level in urban life. In the industrial sector, labour is engaged to the point where the marginal product is equal to the earnings in order not to decrease the industrial surplus. Since labour supply is greater than demand and the wage remains unchanged at rural level, the level of profits is fully maximized.

## 3. METHODOLOGY

### 3.1. Model specification

The approach consists of estimating the models of relationship between the contribution of manufacturing sector and economic growth. The study examine the contribution of manufacturing sector to economic growth in Nigeria economy. A simple regression model is specified as follows:

$$GDP = f(MO) \quad - \quad i$$

Linearising the model and stating it in explicit form we have

$$GDP = \alpha_0 + \alpha_1 MO + U_c \quad - \quad ii$$

Taking the logarithm of both index of the equation, we have

$$\text{Log GDP} = \alpha_0 + \alpha_1 \text{logMO} + U \quad - \quad iii$$

### 3.2. Description of the variable and sources of Data

From the model specified above; the variables used in the study is describes below:

GDP	-	Gross Domestic Product
MO	-	Contribution of the manufacturing output
U	-	Error term

The study employed secondary data sourced from statistical bulletin and World Development indicators. WDI Annual data spanning from 1981 to 2015 were used. The study makes use of econometric analysis on the availability of data over the period for an in-depth analysis. This wide coverage is essential in order to enhance the reliability of the data used for estimation as well as reliability and consistency of the results. Below is the model specification of the ARDL adopted in analyzing the variables.

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^n \alpha_i \Delta GDP_{t-i} + \sum_{t=1}^n \epsilon_t$$

ARDL co-integration analysis is divided into two parts. In this approach, firstly, null hypothesis; that there is no co-integration relationship between the variables i.e.  $H_0: (\alpha_0 = \alpha_2 = 0)$  tested against the alternative hypothesis that there is cointegration relationship between the variables  $H_1: (\alpha_0 \neq \alpha_2 \neq 0)$ . Test operation is usually established on F – statistic. However, asymptotic distribution of F – statistic of interest does not depend on whether the variables are  $I(0)$  or  $I(1)$ . Thus if the calculated F – statistics is less than the  $I(0)$  accept the null hypothesis and conclude that there is no co-integration between the variable. Moreover, if there is existence of co-integration where F – calculated is greater than  $I(0)$ , reject the null hypothesis, and conclude that there is co-integration then it becomes necessary to run the Error correction Model in the short run.

#### 4. EMPIRICAL RESULT & DISCUSSION

*Table 1: Descriptive Statistic*

	GDP	MO
Mean	13356.42	146.8758
Median	4032.300	145.7000
Maximum	80092.56	178.1000
Minimum	94.33000	133.1000
Std. Dev.	21849.18	11.92636
Skewness	1.996972	0.819812
Kurtosis	5.779124	2.753938
Jarque-Bera	32.55329	3.779754
Probability	0.000000	0.151090
Sum	440761.8	4846.900
Sum Sq. Dev.	1.53E+10	4551.621
Observations	33	33

Table 1 Present a descriptive statistics on the variables. The maximum GDP is 40.32 percent while that of MO is 14.57 percent were recorded. Apart from the first moment statistics of the series, the results of other statistics are also evident from the table. Jarque Bera which measures whether the series is normally distributed for GDP while and accept the alternative hypothesis of normal distribution for MO. Also for Kurtosis the statistics shows that GDP is Mesokurtic while other variable MO is platykurtic suggesting that the distribution is flat, relative to normal. Lastly both the GDP and MO variable is positively skewed implying that the distribution have long tails.

*Table 2: Correlation Matrix*

	GDP	MO
GDP	1.000000	0.519240
MO	0.519240	1.000000

The correlation matrix table above describes the degree of association between the variables. It is assumed that two variables are highly correlated if the correlation coefficient is greater than 0.5, or it is lies between 0.3 and 0.49. Moreover, if this value lies between 0.2 to 0.29 then it is moderate correlation and if it lies between 0.1 to 0.2 it is weak correlation. Thus this result showed that there is high correlation between the variables, of which ARDL will take care of.

*Table 3: Result of Augmented Dikey Fuller Test*

	<b>I(0)</b>			<b>I(1)</b>		
<b>Variables</b>	<b>None</b>	<b>Intercept</b>	<b>Intercept &amp; Trend</b>	<b>Level</b>	<b>Intercept</b>	<b>Intercept &amp; Trend</b>
<b>GDP</b>	<b>-1.9510</b>	<b>-2.9511</b>	<b>-3.5484</b>			
<b>MOU</b>				<b>-1.9520</b>	<b>-2.9604</b>	<b>-3.5626</b>

The above result showed that the time series variables exhibit different order of integration. The variable GDP is stationary at level I(0) while MO is stationary at first difference I(1). Having established this, the Autoregressive distributed lag is the most appropriate analytical method to analyse the variables of the model. This is the analytical method that is the best to analyses variables with different order of integration.

*Table following on the next page*

*Table 4: Result of (ARDL) Autoregressive Distributed Lag*

Dependent Variable: LOG(GDP)				
Method: ARDL				
Date: 07/13/17 Time: 20:46				
Sample (adjusted): 1982 2013				
Included observations: 32 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (2 lags, automatic): LOG(MO)				
Fixed regressors: C				
Number of models evaluated: 3				
Selected Model: ARDL(1, 0)				
Note: final equation sample is larger than selection sample				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(GDP(-1))	0.994748	0.018031	55.17006	0.0000
LOG(MO)	0.287549	0.488279	0.588903	0.5605
C	1.183170	2.380237	-0.497081	0.6229
R-squared	0.992329	Mean dependent var		7.957759
Adjusted R-squared	0.991799	S.D. dependent var		2.141760
S.E. of regression	0.193951	Akaike info criterion		-0.353359
Sum squared resid	1.090897	Schwarz criterion		-0.215946
Log likelihood	8.653743	Hannan-Quinn criter.		-0.307810
F-statistic	1875.614	Durbin-Watson stat		1.965777
Prob(F-statistic)	0.000000			

*\*Note: p-values and any subsequent tests do not account for model selection*

*Table following on the next page*

Table 5: Ardl Boundtest

ARDL Bounds Test				
Date: 07/13/17 Time: 20:55				
Sample: 1982 2013				
Included observations: 32				
Null Hypothesis: No long-run relationships exist				
Test Statistic	Value	K		
F-statistic	0.368817	1		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	4.04	4.78		
5%	4.94	5.73		
2.5%	5.77	6.68		
1%	6.84	7.84		
Test Equation:				
Dependent Variable: DLOG(GDP)				
Method: Least Squares				
Date: 07/13/17 Time: 20:55				
Sample: 1982 2013				
Included observations: 32				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.840802	2.402179	0.766305	0.4497
LOG(MO(-1))	0.422724	0.492879	0.857664	0.3981
LOG(GDP(1))	-0.007067	0.017812	0.396768	0.6944
				0.210754
R-squared	0.024805	Mean dependent var		0.188715
Adjusted R-squared	-0.042450	S.D. dependent var		0.366520
S.E. of regression	0.192679	Akaike info criterion		0.229107
Sum squared resid	1.076634	Schwarz criterion		0.320971
Log likelihood	8.864315	Hannan-Quinn criter.		2.004845
F-statistic	0.368817	Durbin-Watson stat		0.694749
Prob(F-statistic)	0.694749			

The empirical result showed that the contribution of the manufacturing output is 0.28 percent with the p. value of 0.5605 which implies that the contribution of manufacturing output to economic growth is not significant.

## 5. CONCLUSION

The study examines the relationship between the gross domestic product and manufacturing output covering the period of 1981-2015. The unit root conducted revealed that the GDP is I(0) while MO is I(1). Thus, ARDL was adopted for the analysis of long – run relationship between the relevant variables. The result of the analysis carried out showed that there is no co-integration relationship between gross domestic product and manufacturing output. According to the result of analysis, MO has a positive effect on gross domestic product in the long run but not significant. Moreover, the bound test; based on the F – statistic, result showed that there is no co-integration relationship between the variables. Although Government from the past to the present has formulated several policies aiming at improving the manufacturing sector but to no avail. The study recommends that Government should continue to intensify more efforts to improve the performance of the manufacturing sector.

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**APPENDIX**

<b>Year</b>	<b>GDP</b>	<b>MO</b>
<b>1981</b>	94.33	134.70
<b>1982</b>	101.01	135.90
<b>1983</b>	110.06	135.70
<b>1984</b>	116.27	136.70
<b>1985</b>	134.59	137.50
<b>1986</b>	134.6	134.80
<b>1987</b>	193.13	135.10
<b>1988</b>	263.29	135.20
<b>1989</b>	382.26	154.30
<b>1990</b>	472.65	162.90
<b>1991</b>	545.67	178.10
<b>1992</b>	875.34	169.50
<b>1993</b>	1,089.68	145.50
<b>1994</b>	1,399.70	138.70
<b>1995</b>	2,907.36	136.20
<b>1996</b>	4,032.30	136.70
<b>1997</b>	4,189.25	133.10
<b>1998</b>	3,989.45	137.70
<b>1999</b>	4,679.21	138.20
<b>2000</b>	6,713.57	142.20
<b>2001</b>	6,895.20	146.20
<b>2002</b>	7,795.76	146.30
<b>2003</b>	9,913.52	148.00
<b>2004</b>	11,411.07	145.70
<b>2005</b>	14,610.88	145.80
<b>2006</b>	18,564.59	145.90
<b>2007</b>	20,657.32	152.20
<b>2008</b>	24,296.33	156.30
<b>2009</b>	24,794.24	156.40
<b>2010</b>	54,612.26	157.00
<b>2011</b>	62,980.40	160.30
<b>2012</b>	71,713.94	162.7
<b>2013</b>	80,092.56	165.4
<b>2014</b>	89,043.62	
<b>2015</b>	94,144.96	

## TRENDS IN THE DEVELOPMENT OF CONGRESS TOURISM IN THE REPUBLIC OF SERBIA

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### **ABSTRACT**

*Globalization is naturally introducing an increased number of multinational companies, changes in product sales techniques, the launch of new market penetrating products and stronger competition, which is creating the growing need for international business venues and congresses. The Republic of Serbia is geographically located at the intersection of roads and has a plenty of natural and cultural destinations near to the congress centers, while domestic scientific-professional associations are becoming better positioned in the world. Therefore Serbia is becoming the carrier of congress tourism in Southeast Europe. In recent decades, the Republic of Serbia has returned to the MICE market, and in 2013 Serbia has taken the 42nd place in the world by the number of events held on the ICCA list, and held that position also in 2017. Serious commitment to the development of congress tourism has been proven by the establishment of the Congress Bureau of Serbia in 2007. In this type of tourism, tourists usually spends a short time at the destination and stays in more attractive locations, while costs are usually covered by the parent company or sponsors. Additionally, congress tourism also reaches much higher financial revenue than other types of tourism. However, the burdening factor for the development of this type of tourism is insufficient number and quality of accommodation capacities, poorer infrastructure and insufficient promotion. Apart from Belgrade and Novi Sad, which stand out as the leading congress destinations, the development of congress tourism in mountain and spa areas must be encouraged. This paper presents the the existing facts about the importance of this type of tourism, defines the concept, differences and similarities between related types of tourism, determines the state of the existing congress capacities of our country and analyses the directions for the development of congress tourism in Serbia, in accordance with current potentials. This can be achieved by following the worldwide trends of development in the globalization environment, in order to make domestic congress tourism more competitive in the world market.*

**Keywords:** *Congress tourism, financial revenue, globalization, development, Republic of Serbia*

### **1. INTRODUCTION**

Congress tourism belongs to specific forms of tourism and is one of the most influential segments of tourism due to increased consumption and high probability of visitors arriving. Therefore, it requires special attention and place in the national economy, in the analysis, planning and realization of events. The largest number of business trips are directed towards the major cities that represent administrative business centers. The best positioned congress destinations for organizing international meetings in our country are Belgrade and Novi Sad. These two cities have the highest congressional capacities and the easiest transfer. Congress tourism is an important segment of Belgrade's tourist offer, as the city has all the necessary resources for this type of tourism. The users of this product, that is, congressional tourists, usually stay in branded and luxury hotels with conference rooms equipped with telecommunication networks (high speed internet), and the technique necessary for the organization of conferences (projectors, screens, ventilation, etc.). More and more frequent are the demands of users that business conferences and seminars are held outside large business

centers, in a peaceful and environmentally friendly environment, with the possibility of spending spare time in dealing with physical activities and sightseeing. A great chance for Serbia can be in this trend of the development of congress tourism. This tourism product records a growth rate that is above the average of tourism growth, and there is a tendency to increase spending per day of stay, which has always been higher than the average (Đorđević A., Zečević, B., 2015).

## 2. DEFINITION AND IMPORTANCE OF CONGRESS TOURISM

There are various types of tourism, from the more traditional to the more modern and each of them has specific characteristics that distinguish them from others. Generally speaking, in tourism, the main motive of traveling is vacation, getting to know new places, culture, then relaxing, adventure. In order to achieve the journey, it is necessary that, first and foremost, there are elements such as: free time, free resources, as well as readiness of an individual to spend those funds precisely on travels. In congress tourism, the main necessity and motive of the congress guest travels are business reasons and motives (Swarbrooke J. & Horner S. 2001). Therefore, it is necessary to distinguish a business guest from a regular tourist. A business guest resides outside the place of permanent residence and uses the services of different entities for the purpose of education, presentations, finding new clients, lectures, realizing new markets and the like. This type of tourism does not require a guest's free time, but the time spent in this way is considered working time. Costs incurred by a business tourist are not related to his own personal funds, but are covered by the parent company or sponsor. Business or congress tourism should be distinguished from the term "business trip" because the first term includes the experience of a person who travels and spends at least one night out of a permanent place of residence, as opposed to a business trip where a person travels from one place to another without having to spend the night in another place (Đorđević A., Zečević, B., 2015). Traveling for business motives includes travels of individuals of different professions in order to achieve certain business activity: visits to fairs, business negotiations, strengthening of business relations, etc. Participants of the meeting and their guests in the convention place spend more than the average tourist (by some estimates 3-4 times more). The causes of such increased purchasing power are in the structure of these guests. Congressional activity is an exclusive type of tourism, so requirements are higher than for "classical" or "ordinary" tourism, among other things, because the bulk of the costs are covered by institutions that refer individuals or groups to congresses. The most important features of the congress tourism are:

- It takes place throughout the year, ensuring full-time employment;
- It enhances the tourism sector by relying on external infrastructure and bringing jobs to destinations such as attractive areas that would otherwise need to rely on a relatively short summer season;
- Investment in congress tourism leads to the tourist development of cities and the interior;
- Investments in destinations for the needs of business tourists (hotels, restaurants, transport and communications) create benefits which tourists who come for a classic holiday can also gain from, as well as the local population.
- Congress tourism stimulates future new investments because business people can recognize their interest in valorizing attractions in the destination;
- Congress tourism offers greater value with less negative impacts on the environment than mass tourism;
- Participants of the congress usually come in groups and need to be informed, as well as acquainted with the place they come to, in order to make their stay as comfortable and effective as possible (Geić, S. 2011).

Within the framework of congress tourism, the most common forms of organization are congresses, conferences, seminars, symposia and scientific expert meetings. All have their own specificities within the tourist offer and demand. Most of the meetings are held outside of the main tourist season, and therefore it is more possible to extend the stay of participants of gatherings and their followers, by offering a variety of tourist programs. Also, science and technology are being improved, people of different nations and cultures, a certain scientific and professional definition, are converging. In addition, congresses are important from the aspect of propaganda of national and tourist values of the host country, peace in the world, etc. (Štetić, S. 2007). Congress tourism can be presented through the MICE acronym, which makes use of the term "MICE market", and it includes the following: ([www.iapco.org](http://www.iapco.org))

- M – meetings;
- I – incentives ;
- C – congresses & conventions; and
- E – exhibitions & events.

Here we will stay in the segment of "congresses and conferences". In both cases they are organizations of events that bring together a significant number of people. However, there is a difference between these two terms. The Congress represents a regular gathering of a large number of people (from several tens of people to several thousand), all of whom come from the same sphere of education, industry, industry. The purpose of the Congress is to discuss the elements that are important for the work and business activities that delegates professionally deal with, both in the scientific and the practical sphere. The congresses are organized on a regular basis. We can divide them into those that are organized once a year, every two, three or four years to those that are organized several times a year. The conference (convention) is a special kind of meeting whose basic idea is to discuss, define facts, solve problems and consult. The conference differs from the Congress by the number of delegates that is smaller, but also by the focus of the problem that is narrower than the congresses. From the point of view of the offer, another significant feature is presented in the fact that there is a relatively long period of time in which the offer is sent to a potential client and a long client decision period, even up to five years in advance (Kovacevic I. 2017). Also, companies are increasingly organizing joint group trips for employees in order to strengthen the team's business spirit ("team buildings"). Congress tourism is included in the list of priorities in the Tourism Development Strategy of the Republic of Serbia (2005). Regarding the economic benefits of congress tourism, some authors point out that congresses are making significant contributions to regional, local and national economies, but research on the financial effects of congress tourism per country is still not fully developed. It is thus estimated that the average congressional tourist spends three times more than the consumption of an ordinary tourist, thus achieving remarkable financial inflows. Experts estimate that an international gathering of about 1,000 delegates generates about 1 million euros of revenue. In 2016, around 60 international congresses were organized in Serbia, of which the foreign exchange inflow was 25 to 30 million Euros (Kovačević I. [bif.rs/2017/08/](http://bif.rs/2017/08/), from 28.08.2017). Driven by this logic, and taking into account the fact that about 70 international congresses are organized annually in Serbia, the estimated total income from this segment of tourism is about 12 million euros, only by direct participation. This should be added to other types of spending, such as the consumption of tourists outside the congress itself, and also other costs such as the collection of residence taxes, through which the revenue of the local self-government is generated. There are two sets of criteria for defining international events. According to the first, created by the International Congress and Convention Association (ICCA), in order for the event to be considered international it is necessary to have at least 50 participants, to maintain it on a regular basis and to rotate between at least three countries (<http://www.iccaworld.com/aeaps/aeitem.cfm?aeid,04/06/2019>).

On the other hand, according to the criterion of the World Tourism Organization (UNWTO), the "international meeting" meets the following requirements: it takes at least four hours to gather 10 or more participants (UNWTO, 2008). As can be seen, UNWTO sets more flexible criteria for defining an international meeting. The estimated total financial effects of international congress tourism for 2016 are over \$ 11 billion (ICCA Statistics Report, 2016), which talks about the importance of this type of tourism.

### 3. THE REPUBLIC OF SERBIA IN THE INTERNATIONAL CONVENTION SCENE

The geographical position of the Republic of Serbia provides a number of benefits for the development of various types of tourism. First of all, it is located at the intersection of roads, at the touch of various civilizations, and was often attacked by various conquerors. The capital of Serbia is an interesting destination in terms of tourism based on special interests. For centuries it was the target of the conqueror with its geographical position, at the confluence of the two great rivers, and has been developed as a center of the region for decades. Serbia abounds in historical sites in the immediate surroundings. However, the turbulent political situation in the country in recent decades did not favor the development of tourism in general, or congress tourism. The best positioned congress destinations for organizing international meetings in our country are Belgrade and Novi Sad. These two cities have the highest congressional capacities and the easiest transfer. Congress tourism is an important segment of Belgrade's tourist offer, as the city has all the necessary resources for this type of tourism: accommodation capacities, congresses, fairgrounds, the possibility for accompanying tourist programs and experienced congress organizers. Belgrade is almost a two-million city, developed in the seventies as the center of the region. One idea is to use this fact, as well as the traditionally open and cordial spirit of the city and people. The intensive development of the congress activity in our country began in the 1960s. Belgrade was then, as it is today, the main congress destination. The activity of organizing fairs, conferences, and similar events in the region of Southeast Europe is becoming more and more important, and a large number of international organizers are looking for a suitable place for the organization. Serbia at the heart of the region is a good location for companies wanting to expand their business in the region. The Tourism Organization of Serbia is in charge of carrying out activities of promotion of tourism, coordination and activities of tourist agencies, business and other facilities in tourism in the territory of the Republic of Serbia. It is responsible for the period of more intensive development of congress tourism in Serbia, which begins with the formation of the Congress Bureau of Serbia in 2007, with the task of developing, coordinating, marketing, and breaking of Serbia as a congress destination into the international market.

*Table 1: Total accommodation capacities according to hotel categorization (5, 4, 3, 2 stars) in the Republic of Serbia*

	*****	****	***	**
Hotels	10	86	103	105
Rooms	1183	5595	4929	3965
Berths	1709	9996	8841	8234

*Source:* <http://www.kongresnitorizam.com/drzave/srbija> (accessed 06.04.2019)

*Table following on the next page*

*Table 2: Statistical report of the international congress association (ICCA)*

	2010	2011	2012	2013	2014	2015	2016	2017
Rank	43	42	46	42	46	47	48	42
Number of international congresses	46	55	52	66	67	64	66	71

Source: <http://www.iccaworld.com/aeps/aeitem.cfm?aeid>,  
<http://www.kongresniturizam.com/drzave/srbija>, (accessed 06.04.2019.)

When it comes to congress tourism in Serbia, the data show that Serbia has returned to the international scene in the last decades and is in a strong trend of increasing the number of events. It is necessary to note that in Serbia only a few destinations can be categorized as a congress destination, which are: Belgrade, Novi Sad and in recent times Zlatibor. Belgrade ranked 46th in the list of the most visited congressional cities on the ICCA list in 2017, with 51 international events <http://www.iccaworld.com/aeps/aeitem.cfm?aeid> (April 6, 2019). Two basic congress infrastructure destinations are congress centers and hotels.

### 3.1. Congress Centers in Serbia

The congress centers represent the basic congress infrastructure of the destination, so in this sense it is necessary to list the most important congress centers in Serbia. These are Sava Centar in Belgrade and Master in Novi Sad. The congress tourism of Belgrade, even Serbia, was based primarily on the Sava Centar and several hotels of high category in its immediate vicinity. The Sava Center is connected to the Crowne Plaza Hotel. It was built on the highway Belgrade-Zagreb, near the Nikola Tesla airport and the railway and bus station (Vukašinović, N. 2016). It was built for the needs of the Organization of the Non-Aligned Countries Summit, and it is a multifunctional facility, which represents a strategic advantage over the competition for the simple reason that such facilities are not in a wider environment. Today it has 18 conference halls, the largest of which has 3672 seats (<http://www.kongresniturizam.com/Grad/> 06.04.2019). The priority is the reconstruction of the Sava Centar, which is primarily related to the halls and solution of energy efficiency. Delaying the renovation calls into question the serious organization of already scheduled international events, which are, as a rule, determined in a couple of years in advance, but also calls into question the scheduling of new events. The Sava Center owns its own PCO (Professional Conference Organizer), the agency, the information department and the food and beverage department that are in charge of serving on various events. The Sava Centar is owned by the City of Belgrade, which is also common practice in the world, because it is a big capital investment. In the immediate vicinity there are several high category hotels: "Hyatt Regency", "IN hotel", "Holiday Inn" and others. When it comes to destinations that would enrich the visit of a congressional tourist to Belgrade, and which could influence the desire for a return visit, Kalemegdan and its immediate environment are the most important point. The Belgrade Fortress represents a huge but unused potential. It is necessary to revive and promote Kalemegdan primarily in the cultural and artistic sense, to point out the diversity of the influence of the numerous peoples who passed through it and its importance to the history of Belgrade and Serbia and to promote interesting tours of important places and events for the former Yugoslavia (Flower House, Crvena Zvezda Stadium, Otpisani Tour, etc.). The huge potential of the city lies in the Danube and Sava and their coastal area (Vukašinović, N. 2016). It is necessary to make better use of their coasts, in terms of categorization of objects located on the water or next to it. The Master Center in Novi Sad has one large and six smaller congress halls. The capacity of the big hall is 350 seats, and the maximum capacity, when all the points in the center are joined is up to 1000 places (<http://www.panacomp-kongresi.net/2016/01/04/master-centar-novi-sad/>, 04/06/2019).

In Serbia, in addition to these two, there is currently no significant congress center, although it invests heavily in developing other destinations, such as Subotica, Zlatibor, and Stara planina.

### **3.2. Hotel offer in Serbia**

Serious hotel offer in Serbia includes most of the hotels in Belgrade and Novi Sad, and by 2011 it was determined by the existence of smaller hotels, and with only three international hotels: Hyatt, Best Western and Intercontinental Hotel Group. From 2011. there is a period of intensive construction of a better hotel, category four or five stars, mainly for the needs of congressional tourists. Of the larger investments related to hotels in Belgrade, mention should be made of the reconstruction of the Metropol hotel, which started under the Starwood, the Luxury Collection brand. For now, it is the only congress hotel in the center of Belgrade, but with hotels located in close proximity such as Zira hotel, Park hotel, Excelsior hotel and Slavija hotel, represents a significant congressional unit in offer of Belgrade. An investment was also made in Holiday Inn Express Hotel, a 3 \* brand of Intercontinental Hotel Groups, which completes the aforementioned congressional complex. In the very center of the city, apart from already well-known hotels such as Moscow, the Balkans, Casinos, Majestic, Palace the structure of accommodation is promoted by the opening of Hotel BAH, Square 9, Envoy and the opening of Cortyard by Marriott in the autumn of 2015. A much more important congressional unit was concentrated around the Sava Center. In December 2013, the former Continental hotel was closed, which, after complete renovation, started operating under the group of Intercontinental Hotel Groups, under the brand name.

## **4. GLOBALIZATION AND TRENDS OF DEVELOPMENT OF CONGRESS TOURISM**

One of the main impacts globalization has on congress tourism is the full dependence on global economic change, such as the global economic crisis. In the time of the economic crisis, the congress tourism is changing its way of business, visibly decreasing its intensity. First of all, in the conditions of crises, economic and other, the costs of organizing the congress are reduced. We will mention some of the characteristics and trends that will follow the corporate market in the following period:

- allocations for business trips and the organization of corporate meetings and events are growing, with growth rates extremely modest and with an average rate of 2% annually; most of the company's activities tend to do without engaging external suppliers (such as DMCs);
- Focus companies have control over the costs of organizing events and meetings; it means the use of preferred suppliers (for the benefit of beneficiaries), the use of hotels of lower categories (four-star and three- star hotels become the primary choice), reduction of premium travel category (even for directors and leading managers of companies), more frequent use of low-tariff airplanes companies, as well as turning to internet search, contracting and paying
- companies reduce volume and frequency of meetings; This involves reducing the organization of internal meetings and events, shortening the duration of travel (and events), reducing the number of corporate delegates, hindering travel authorization, the growth in the use of video conferencing
- the growth in the use of mobile phones (and in general mobile distribution channels) for the purpose of reserving services within a congress destination; It is estimated that in 2015 in the corporate segment almost 20% of the services were reserved by that route ([http://www.phocuswright.com/free\\_](http://www.phocuswright.com/free_)).

In addition to the mentioned possible economic factors in the development of the international congress tourism market, there is also a set of others that create, or will create, significant effects. Among the most important, we can highlight the following (German Convention Bureau GCB 2013): globalization and internationalization, resource constraints, urbanization, demographic change, technology as everyday life, sustainable development, mobility, safety and security. Globalization affects all industries, including congress tourism. As the inevitability of globalization, competition is highlighted. Increasing the imposition of new destinations requires that those who are already positioned change the way they operate in all their branches. Globalization is a chance for new markets and the challenge for the old to do business "in step with the times". For this it is crucial to understand the changes in the market, but accordingly invest in the education of staff, in various trainings, in order to improve the quality of the offer. As a result of the intensive use of natural resources, in the last decades, there is an energy crisis, as a feature of globalization. By investing in technology, the need to utilize natural resources can be reduced, as witnessed by many economically powerful countries with limited resources, such as, for example, Japan, Sweden, Denmark, etc. Demographic change has significant effects on congress tourism, because it is primarily about the activity that requires a large number of employees, and the fluctuation of a large number of people, participants, people who are in the organization. An important trend is feminisation, but also family care, so planning and organization should focus on security issues and child care organizations. Also, a very important sociological segment of the organization must also be to accommodate people with disabilities, as well as older participants (and in connection with the global aging of the population), which requires special infrastructure investments (accesses, toilets), as well as adjusting the duration of the congress. Furthermore, there are more and more friendly hotels in the world, namely hotels that accept pets, and this should be taken into account during the organization. In the era of globalization, emphasis should be placed on IT technology, in order to contribute to the development of this industry-planning, a high level of productivity, preparation of delegates before arrival, shortening the duration of the event, and increasing the number of events. Consciousness about the importance of sustainable tourism begins to dominate in all sectors of tourism, and in large part of tourism demand (Bakić, O.2008): Principles of sustainable development - economic sustainability, cultural sustainability, environmental sustainability and local sustainability - must always be respected in the development of the destination Tomka D, Jegdic V.2012). The social responsibility of the organizer implies that when organizing an event, it takes into account useful social and economic impacts on the destination itself, and programs are implemented in different ways, through donations, joint work, and the like There are many examples of green meetings in practice., but it can be said that the basic trend is the recycling of waste, as well as the care of the natural environment. Green technologies primarily relate to construction modes and maintenance system of congress facilities the use of recycled materials, and the use of alternative energy sources. The increasing concern about the impacts of the events on the environment puts the negative effects of their organization on the forefront. The consequences of organizing events are the result of using non-recyclable materials, large amounts of waste that occur after each event, and the like. Negative effects can be overcome by implementing some of the principles within the main elements of the organization (Kovacevic I. 2017):

- Sustainable transport of delegates to and from the destination - when choosing a congress area, it should be ensured that accessibility for almost all delegates (including delegates with special needs) is not a problem and that they can use public transport (often for free with a registration badge) or even arrive by foot; for an official air carrier, an airline company should be selected that has a minimal environmental impact from the aspect of noise, and fuel consumption and therefore is an environmentally friendly company;

- Implementation of standards of importance for the environment - organizers should decide on congress areas which in their daily operations apply certificates such as ISO14001 or EMAS;
- Printed material and marketing - the amount of printed material must be reduced, and recycled paper should always be used in the press, pursuing the replacement of printed material, digital versions, and use electronic registration of participants, and electronic aspects of marketing;
- Technology – it is always necessary to use technology that can be used again;
- Catering - Small local producers should be used, products in season should be insisted on,, and food should be ordered in reasonable quantities.

Safety and security are very important issues, especially because congresses are by rule the gathering of financially more powerful people, but also people of different religious, political and other beliefs. Data security is also pointed out, as new products are often presented at congresses, and data protection is very important. Companies must invest in security systems that will store and safely take care of data. One of the recent trends in congress tourism is the arrival of "meetingcentives", which represents a combination of meetings / conferences / congresses and incentive trips, and one of the reasons for the emergence of "meetingcentives" is an economic crisis that has caused the organizers to justify the money spent on an incentive trip, so they then combine it with meetings where new solutions are sought, exchanging ideas and the like (Kovacevic I. 2017). In addition to the necessary investments in staff training, it is very important to invest in marketing, in order to use congress tourism in the Republic of Serbia with full potential, and be competitive in the world market.

## 5. CONCLUSION

By organizing international events such as congresses, the state generates high financial revenues, attracts mainly tourists that are more influential in their business area. The average consumption of a congressional tourist during the duration of the congress is three or four times that of a "classic" or "ordinary" tourist. The reasons for this lie mostly in the fact that congresses usually bring together a more successful business client, but also in the type of travel organization, where the costs of accommodation, organization, nutrition and often supplementary activities are borne by the parent company or sponsor. Since 2005, when congress tourism has been included in the list of priorities in the Tourism Development Strategy of the Republic of Serbia, through 2007, when the Congress Bureau of the Republic of Serbia was formed, to this day, our country is on the upward path of growth and development. As a specific form of tourism, in the era of globalization, congress tourism is characterized by a large volume of demand. Through congress tourism, not only companies that organize the event are promoted, but also the national tourism of the country is indirectly promoted. The geographical position of the Republic of Serbia, besides other cultural and historical contents, provides a number of advantages for the development of this type of tourism. The best positioned congress destinations for organizing international meetings in our country are Belgrade and Novi Sad. These two cities have the highest congressional capacities and the easiest transfer. Congress tourism is an important segment of Belgrade's tourist offer, as the city has all the necessary resources for this type of tourism: accommodation capacities, congresses, fairgrounds, the possibility for accompanying tourist programs and experienced congress organizers. The Republic of Serbia, as a congress destination, has potential, so it is necessary to complete natural beauties with cultural goods, professionalism with directness, in order for foreign tourists to feel the unique spirit of our country. Natural goods, such as spas, mountains, caves, need to be enriched with good infrastructure, all supported by good organization and marketing. In the time of globalization, it is also desirable to follow the world trends of development, such as IT

technologies, through the improvement of conference room equipment and staffing, paying attention to globalization flows such as population aging, and adapting the content to those clients. In times of expansion of the economy, there is an increasing resource exhaustion, and it is necessary to follow the world trends of sustainable tourism. Special attention should be paid to the more negative challenges of globalization, such as human security and information. Certainly, investment in infrastructure, especially congress centers and hotels, is the priority of development in Serbia, in the first place, the reconstruction of the Sava Center. All this goes for the fact that domestic scientific-professional associations are well-positioned in the world, which is an opportunity to present domestic knowledge and expertise to foreigners, but also promote domestic products. The largest number of business trips are directed towards the major cities that represent administrative business centers. More and more frequent are the demands of users that business conferences and seminars are held outside large business centers, in a peaceful and environmentally friendly environment, with the possibility of spending spare time in dealing with physical activities and sightseeing. The great chance of Serbia can be in the trend of developing congress tourism outside the big city centers.

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## FINANCING AND MANUFACTURING ORGANIC FOOD AS THE CONSEQUENCE OF THE HOLY TRINITY GMO

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### ABSTRACT

*This paper aims to explain the essence of the problem of production, trade and consumption of genetically modified products in a simple and comprehensible manner, especially from the point of view of health safety and consequences for animals and humans. During the preparation of this work, the method of analysis, method of synthesis, deduction and induction was used. The paper presents the most significant results of experimental research by scientists and institutions that are engaged or found in corporations that produce genetically modified seed and pesticides. But it also presents the results of independent experts who are not influenced by the producers of genetically modified organisms primarily Monsanto. The so-called Holy Trinity of genetically modified organisms is analyzed and explained. The authors consider that the first element of the Holy Trinity is the production and sale of seeds that are genetically modified by the application of biotechnology (by introducing the genes of distant and unrelated species of plants and animals), that the second element of the Holy Trinity is the production and sale of protective products as a condition for these plants to survive and harvest, which produce and sell seed producers, and the third element of the Holy Trinity is the production and sale of medicines when negative health consequences occur. Bearing in mind that Bayer bought Monsanto, then the Holy Trinity is fully understood. So Bayer, who in its manufacturing standards program already has a production of medicines, bought the company that produces GM seeds and pesticides. So the holder of the Holy Trinity is one company, Bayer. As an alternative to GMO production, traffic and consumption, organic production is considered to be completely safe for the health of animals and people. This study is also dealing with financing of organic production. The paper emphasizes that organic production provides fertile soil, quality water, environmental protection and it supports sustainable economic development, and above all it is safe for human health.*

**Keywords:** *organic food, financing, Holy Trinity, sustainable economic development*

### 1. INTRODUCTION

When it comes to organic production, or organic food production, it is often thought that this is the production of agricultural products in which no protective means are used. Those are "unprocessed products". This term is used by agricultural producers, and for the sake of emphasizing the basic characteristic of these products, they are completely safe for human consumption. The experts know that some organic products are not treated, sprayed. Also, organic production involves treating with protective means, but only those that are prescribed and allowed in organic production, those products are based on extracts of plants and ashes.

In the Republic of Serbia, 39 products based on copper and sulfur are approved for the treatment of organic products<sup>1</sup>. Therefore, it is not inaccurate under organic production, that is, under the production of organic foods, to mean production that is not treated with chemical preparations because this is possible, but this product implies a far wider aspect in terms of health safety, environmental impact, and economic development. Bearing in mind the very high importance of organic production, it is defined in many ways. Thus, organic production is defined as "Biological production" [4] because it provides preservation of living organisms in nature. The same author points out that organic production can also be considered as "organic farming" because it is an agricultural production in which products are not treated with chemicals, which results in the preservation of the environment because no chemicals are introduced into the eco system. Organic production is also called "Agroecology" (Gliessman 2012). This term aims to highlight the application of environmental principles for the protection of the environment, and at the same time asserts the management of sustainable agricultural systems. Organic production involves an old method of production, that is reason that organic production is called "Traditional production" (Cifric 2009). However, this author loses sight of the fact that the old way of production, which really had all the attributes of organic production, was dominant for the needs of individual households, less for satisfying wider needs, and that today's organic production has broader social aspects. In contrast to organic production, today, almost the entire world is faced with the production of agricultural products that are genetically modified. In the professional public, although numerous authors and other theoreticians, in various ways, define and explain genetically modified organisms (GMOs), they agree that they are organisms produced in laboratory conditions using genetic engineering techniques, using recombination of deoxyribonucleic acid (DNA). Through this technique comes to joining the DNA of various unrelated and distant species of plants and animals and creates new unstable species of plants and animals that can never occur in nature. These new plants produced by biotechnology are used for feeding animals, and then they come to the human diet through the food chain (Ostojic 2012). Trkulja (Trkulja et al., 2014) points out that GMOs are such organisms that contain one or more genes of distant and unrelated species that are introduced into them in laboratory conditions. The European Commission's Directive defines genetically modified organisms as organisms with the exception of human beings, in which genetic material is altered in a way that does not occur through natural reproduction and / or natural recombination. The basic reason for genetic modification is the same as traditional crossing, it is to obtain new species with improved characteristics (Škorić 2006). However, between intersection and genetic modification there are essentially significant differences. In fact, traditional crossing includes transfer of genetic material between the same species or of highly related plants, while genetic engineering involves the administration of one or more genes of any desired type (related or unrelated, animal or plant, a close or distant) and thus genetically modified organisms are obtained (Konstatinov, Mladenović-Drinić 2006). Thus, by traditional crossing, new species with improved characteristics are obtained, and it is very precisely known what kind of new species will be obtained. In genetic engineering, since the genes of distant and unrelated species are used, new and unstable plants or animals are produced, for which it can not be precisely known how they will behave in the future. Thus, among theorists, it is beyond doubt that genetically modified organisms include organisms whose genes have been altered in a way that could never have happened in nature because they take genes from distant and unrelated species that change their hereditary properties and deletes the natural boundaries.

<sup>1</sup>List of registered plant protection products that can be used in organic production.  
([http://www.uzb.minpolj.gov.rs/attachments/252\\_Lista\\_sredstava\\_za\\_zastitu\\_bilja\\_za\\_organiku\\_proizvodnju04okt.pdf](http://www.uzb.minpolj.gov.rs/attachments/252_Lista_sredstava_za_zastitu_bilja_za_organiku_proizvodnju04okt.pdf)).

## 2. PROBLEMS OF GENETICALLY MODIFIED ORGANISMS

When creating genetically modified organisms, three problems arise: The first problem is that plant and animal species are crossed, and it is quite certain that this will happen with man. Another very big problem is that genetically modified organisms have the ability to create insecticides themselves and thus destroy not only harmful insecticides but also useful. This is characteristic of bees. The third problem is that genetically modified plants are resistant to certain herbicides that destroy all flora and fauna other than that plant, while at the same time polluting the soil and watercourses. Today in the world there is no full agreement between scientists and experts whether genetically modified products, which through the food chain enter human food, are completely safe for human health. There are numerous experts and institutions who claim that genetically modified organisms, which through the feeding chain enter into human nutrition, are completely safe for human health. However, all these professionals and institutions or their largest number are, as a rule, financed by companies that produce genetically modified products, and because of that, a different opinion can not be expected from them. But there are also numerous independent experts, both, from east and west, who have experimentally investigated the impact of GMOs on animal health and found the negative impact of GMOs on experimental animals such as mice, rats, rabbits. Thus, Dr. Pusztai, as the first independent researcher, found that in the experimental mice there was a weakening of the immune system, the internal organs were lighter, and the biggest change occurred on the brain because it was significantly smaller compared to a parallel group that was not fed by GMO-potatoes. Professor Seralini in 2007 (Seralini et al., 2007) proved that rats fed by GM corn MON863 (Monsanto producer) got liver and kidney toxicity and concluded that GM corn MON863 was not safe for food, and that same year published a study on the toxicity of Monsanto Herbicide Roundup. In 2012, prof. Seralini (Seralini 2014), based on a two-year experiment in secret on 200 rats, presented the conclusions of the deadly effects of Monsanto's NK603 corn. Italian scientist M. Malatest 2014 found that in mice fed by GM soya treated with herbicide Round up, there are pathological changes in the liver, pancreas. Australian scientists have found that the animals that were fed by GM products comes weakening the immune system and pneumonia. French scientists have shown that on rats fed by GM corn, pathological changes occur on the liver, kidneys, pancreas and reproductive organs. German scientist Doerfler came to the conclusion that GMO affecting the formation of tumors and other oncological diseases. Russian scientist Jermakova has shown that in rabbits feeding by GM soy there is an increase in mortality in the first generation, the underdevelopment of those who survived, but also the sterility and thus the absence of the second generation. Thus, independent scientists in the east and west experimentally established the harmfulness of GMOs for animal health, which can undoubtedly conclude that human food products containing GMOs in long-term use are harmful to human health. Of course, all these experiments and conclusions, which speak about the harmfulness of GMOs, are not publicly presented, the public is not sufficiently familiar with them, and therefore there is not enough critical opinion on this very important topic. However, if it is known that most EU countries (Germany, France, Austria, Netherlands, Hungary, Poland, Italy, Latvia, Lithuania, Bulgaria, Croatia, Greece, Cyprus, Belgium (Wallonia) Scotland, Wales, Northern Ireland) prohibit the production of genetically modified organisms on their territory, it is quite clear that they do not do this without a serious reason. Also, it should be pointed out that the San Francisco court passed a first-instance verdict obliging Monsanto to give Dwayne Johnson a \$ 289 million in damages because he suffered from cancer. During the trial, the first-instance court found that the herbicide round up, used by Johnson as a gardener, contributed to his illness, and that Monsanto should have pointed out a warning about a possible risk to human health, and Monsanto did not. The fact that farmers last fall in France and Germany dug thousands of hectares of land planted with oilseed radish after they found traces of genetically modified organisms in its seed.

In addition to the fact that only 0.005% of the total quantity of planted seeds found traces of genetically modified organisms, whole crops were dug up. It is very important to say that some geneticists claim that the process of genetically modified organisms has passed, although there are still controversies about the harmfulness of GMOs for health, animals, people and environmental damage, and that the time of genetically edited organisms (GEO) is coming, which is significant higher level of genetic engineering.

### **3. HOLY TRINITY OF PRODUCTION OF GENETICALLY MODIFIED FOOD**

When we talk about Trinity then we understand its functional connections, causal or causal connection, and the realization of multiple effects. When it comes to the Holy Trinity of genetically modified organisms, then it starts from seed producers. Scientific, professional and general public is aware that the world's largest producer of genetically modified seed is company Monsanto. The company Monsanto, whose current activity is biotechnology, was founded by Francis Queeny in 1901. in Missouri, a man who spent 30 years in the pharmaceutical industry. The basis of biotechnology is that the company Monsanto produces seeds of various types of plants that represent genetically modified products. Therefore, genetically modified seeds represent the first element of the "Holy Trinity". Alongside the development and production of genetically modified seeds of various plant crops, Monsanto develops and produces various herbicides and pesticides to protect their genetically modified plants. Thus, in 1964, Monsanto produced the herbicide Ramrod, and in 1968 produced the herbicide Lasso. The most important and most famous Monsanto herbicide is Roundap, which is also recognizable throughout the world. So, the second element of the "Holy Trinity" is the production and placement of protective agents for genetically modified organisms, because without these protective agents these organisms would not succeed. Even the genetically modified plants produce pesticides that destroy harmful insects, but simultaneously destroy useful insects such as bees that participate in the pollination of all herbs more than 80%. Therefore, genetically modified plants can not survive without the protective agents produced by seed producers of these plants. Here we come to the full dependence of users of genetically modified seed of pesticides of the same producers. This in fact means that we have the exploitation of users of genetically modified seed by the producers of this seed, who are at the same time the producers of protective agents, which is essentially legal exploitation. Namely, both genetically modified seeds and protective agents that must be used to keep the plants alive and give offspring are by their very nature the patents of the companies that produce them. Under patent rights, users of genetically modified seeds can not retain part of the seed for the next set from their harvest but are already obligated to re-purchase genetically modified seed from the same or another producer, but then again from that same manufacturer they must, and are forced to buy protective products without which there is no harvest. In addition to this kind of exploitation and conditioning and production methods, the previous research has shown that there is no reliable knowledge that indicates that genetically modified organisms, which through the food chain come to human food, are completely safe for human health. Namely, numerous institutions under the control of Monsanto, as the largest producer of genetically modified organisms, are of the opinion that genetically modified organisms are safe for human consumption and do not contribute to any diseases (Papić-Brankov T. 2013, Endgdahl W. 2005.). Despite this general statement, as early as 1998, president of Monsanto stated that Monsanto was not a food security company, but that the Food Safety Authority (FDA) was responsible for food safety. This in fact means that all responsibility for any diseases that result from the use of GMO Monsanto is transferred to the FDA. However, there are significant studies that indicate that animals fed to genetically modified organisms have been infected with various diseases. If the animals are suffering from these diseases is quite realistic to expect that people too will get same or similar diseases after a long use of food products that contain

genetically modified organisms. When considering the pathology mentioned, then it can be concluded consequently that medications are needed to treat them. And there comes the third element of the "Holy Trinity" of GMOs, and these are medicines. So, the "Holy Trinity" of GMOs is seed, herbicides and medicines.

#### **4. ORGANIC PRODUCTION AS A CONSEQUENCES OF PRODUCTION AND TRAFFIC OF GMO AND ITS FINANCING**

As there is no full consensus in the world today that GMOs are completely safe for health, although there is a large number of studies showing that long-term use of GMOs leads to various pathological changes, the authors of this paper find that the solution to this problem lies in organic production. Namely, organic production is based on the principles of health, ecology and fairness (Beslac, Coric 2017). The principle of health implies not only human health but the health of ecosystems as a whole. Namely, the principle of organic production health implies that health is important for both humans and all plants and animals and land, or ecology in general. This principle should secure ecosystem, which means people, plants and animals, including those that are in the earth, or under the earth. The principle of ecology involves such production using renewable energy sources and to achieve a natural ecological balance and a positive impact on soil, water, air, forests and so on. The principle of justice implies that the overall ecosystem is common and that no one has the right to violate it, for the sake of their own interests, endangering others, and therefore the entire civilization. Natural resources on the planet's earth must be managed in a socially useful and responsible manner so that they are provided for use, not only for the present generations, but also for generations in the future. Therefore, the production of organic food must be part of the overall economic development policy, and in particular the part of the agro-industry policy. In order to ensure the production of organic food, the overall agricultural policy of the country must be focused in that direction. This in fact means that the various measures and incentives should be used to motivate farmers to grow organic food. In order to motivate them, they must receive incentives that are related to the whole production process. Specifically, these incentives must be linked to the purchase of seeds, the protection that is provided for organic production, and determination of price parity. Also, legal regulation must be such that it unambiguously separates products that are produced according to organic production principles from those that contain GMOs. Therefore, in order for organic food production to become dominant in relation to GMO production, agricultural policy and the country must play a decisive role. In order to fulfill this role, it must form certain laboratories and educate experts who will unambiguously be able to determine whether GMO elements are present in some production. Then, the labeling of the product must be such that consumers can clearly understand whether they are buying organic products or products containing genetically modified organisms. Penal policy must also be harsh for those who violate provided rules or confuse, mislead or deceive consumers. Today, there is quite misleading opinion in the public that organic products are only for the rich, or for those who can pay higher or the highest prices for organic products. Examples in Germany and Slovenia deny such attitudes because there are, in these countries, very little or no differences in the prices of organic and inorganic food products. In some countries, such as Serbia, there are indeed significant differences in the prices of organic and inorganic food. But the consequence of these differences lies in the fact that Serbia has very few areas and farmers who produce organic products and very modest incentives for this type of production. Increasing the production of these products lawfully decreases their prices. The fact is that agricultural production is low-profit and that all countries of the world co-finance agricultural production through various instruments, subsidies, incentives, and the like. The reason for such an approach to agricultural production is that only agricultural production enables the production of food without which there is no life.

Therefore, agricultural production can not be financed under commercial conditions, but there must be specific banks (agro banks) that must approve funds for agricultural production at significantly lower interest rates, and the country must provide funds for subsidies, incentives, etc. The production of organic food, as a specific type of production must be accompanied by the agrarian policy of the country that will allow the production of this non-bank sources of funding through a variety of incentives, subsidies, grants or loans with long repayment period and low interest rates. This kind of agrarian policy enables the production of organic healthy food in which there is no doubt that it affects human and animal health, which contributes to the improvement of the ecosystem, and at the same time to the country's progressive development. As already said, people's lives are based on food consumption. If the country produces enough food, and especially healthy food, it acquires the conditions for further dynamic economic development. Financing of organic food production by the formation of non-banking financial institutions is simultaneously developing the banking sector, based on high placements with low margins, which further contributes to production and consumption.

## 5. CONCLUSION

Today in the world there is general disagreement and numerous controversies about the harmfulness of genetically modified organisms for the health of animals, people and the negative impact on the environment. The negative impacts of genetically modified organisms on the health of animals, people, and a negative impact on the environment is most clearly illustrated by the fact that the majority of EU countries do not allow the production of these organisms in their territory. The production of genetically modified organisms in its essence has the role of "Holy Trinity", which consists in the fact that there is a causal link between the production of genetically modified seed, the production of protective agents for the treatment of genetically modified crops and the production of medicines for the treatment of those who get sick, and the cause of the disease is associated with the use of GMOs or pesticides used to treat them. Monsanto's acquisition by Bayer created a powerful company, which controls a quarter of the production of seeds in the world. In the world today, there is full agreement that organic products are not harmful to human health, animals and do not cause harm, but instead contribute to the improvement of the overall ecosystem. In order for organic production to become dominant, it is necessary above all to have an adequate overall economic policy, and in its composition, agricultural policy. These policies include the use of non-banking organizations and agro-banks that finance this production at low interest rates in the long term, and that the country stimulates organic production with various subsidies incentives, etc. Therefore, the production of organic food in the necessary quantities will reduce its price, and will ensure healthy nutrition of people and animals, will ensure the improvement of eco systems and will stimulate overall economic development.

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# NATURAL DISASTERS AS A FORM OF A SECURITY THREAT

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## **ABSTRACT**

*Natural disasters, that endanger human lives and material goods, have become almost everyday occurrence all around the world. Induced by climate changes or as a part of usual natural processes, they have become serious security threat for people, infrastructure, and material goods in general. Consequently, they have become a challenge for security agencies and emergency services in the affected area. All these services must have an adequate response to these, unusual, circumstances in order to prevent the loss of human lives and to minimize material damage, and to restore the functioning, life and work of people in their environment. It is not uncommon case that different natural disasters come one after another or even at the same time, tied to one another, which makes additionally difficult to save people and their property and to repair incurred damage. In addition to the fact that, by their appearance and destructive power, they significantly threaten people and their property, natural disasters also have another, significant security component, which is exclusively related to human activities, i.e. is caused by the actions of people in terms of endangering the safety in the area affected by the natural disaster. Therefore, at the time of natural disasters, as a rule, the resulting turmoil is used by people, criminal groups or individuals, who, with their opportunistic actions, can additionally endanger the lives of people and/or their property.*

*That represents an additional security challenge for security agencies in the vulnerable area and needs to be given additional attention.*

**Keywords:** *security, natural disasters, endangering safety, emergency services, security agencies*

## **1. INTRODUCTION**

Almost daily, the media is full of information about the natural disasters that are disrupting every meridian of the Earth's sphere and taking dozens and often hundreds of human lives. Of course, unimaginable material damages have been made on housing facilities, factory plants and other infrastructure also. When it comes to the safety of people and material goods, it is usually the first thought of endangering security that is directly caused by human activities. That, undoubtedly, represents a significant threat to human lives, and such phenomena can not be underestimated or neglected. But, it must be borne in mind that, also, there are certain phenomena in nature that are very important for the security area, and people and material goods. Therefore, weather disasters or accidents, probably caused and accelerated by climate change and other natural processes, are not related to direct human impact, but they significantly affect the safety of people and material goods in a country or even a region. Since such phenomena represent a very serious security threat, they should be viewed and treated with maximum care and seriousness, and the security structures should develop an adequate system for the timely detection or foresight of such disasters, for informing the population of the vulnerable area of the emerging threats and ultimately, for providing the necessary assistance and to repair the damage that has occurred, in order to bring people's lives back to normality as soon as possible.

## **2. NATURAL DISASTERS**

In different countries there are different natural disasters. If, for example, the normal temperature in Africa is 40-50°C, in other parts of the world it is natural disaster and unbearable

heat. If there is constant ice on the poles, on the other parts of the world that would be unbearable living conditions. So, we will deal with the problem of security threats and explaining certain natural phenomena in a certain area, on which they are, almost usually, occurring from time to time and significantly compromising the security of people and material goods. Due to the extent of the topic itself, we will mention only some of the natural disasters.

## 2.1. Floods

Flood (inundation) is a natural phenomenon that marks an unusually high water level in rivers and lakes, due to which the water from the river bed or lake wrecks overflows over the shore and floods the surrounding area (<https://sr.wikipedia.org/sr-el/Поплава>, accessed: 03.10.2018). By the word flood it is also considered a significantly less frequent and short-term occurrence happening on the shores of the sea when, due to the rise of the sea level, there is a flood of the surrounding area. The Floods Directive of the European Union defines the flood as "covering with water land that is normally not covered by water" (Directive 2007/60/EC Chapter 1 Article 2, accessed: 03.10.2018.). The causes that lead to the pouring of water from rivers and lakes, and therefore floods, can be different. Usually these are large and long-lasting precipitation, sudden melting of large amounts of snow or ice, the plunge of large quantities of torrential waters that watercourses can't receive, etc. On large lake and sea surfaces the causes of rising water levels and flooding may be strong earthquakes beneath the water surface itself or in the immediate vicinity, hurricane winds that lead to raising high waves, or volcanic activity below the aquatic surface or in the immediate vicinity. It needs to be mentioned that the causes can also be dam and embankment failure, caused by the action of natural causes (earthquakes, volcanoes, landslides...), leading to immediate high water wave. Also, the cause of flooding can be the modification of the channel geometry and other watercourses or the construction of objects in the immediate vicinity. Even bridges that are built on watercourses can be the cause of large amount of water flooding due to flow congestion caused by debris or some other structures - wrecks, rusted vegetation, and similar. Therefore, floods occur when the inflow of water is multiple times larger than the possibility of absorption into the ground or drainage of incoming quantities of water.

*Picture 1: Floods*



(source: [https://www.google.com/search?q=poplave&client=opera&hs=gaP&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiBw4qWuYjeAhWLDiwKHeQwAaIQ\\_AUIDigB&biw=1061&bih=510&dpr=1.25#imgrc=Dh88RtNs7-MP1M](https://www.google.com/search?q=poplave&client=opera&hs=gaP&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiBw4qWuYjeAhWLDiwKHeQwAaIQ_AUIDigB&biw=1061&bih=510&dpr=1.25#imgrc=Dh88RtNs7-MP1M) (accessed: 15.10.2018.)).

According to the World Health Organization (WHO), only in late November and early December 2004, in the Philippines, 1060 people were killed, 1023 injured and 559 missing in the tropical storms. About 880,000 people have been displaced due to the floods, and around 3.6 million people are estimated to be endangered on various grounds (from storms, landslides, floods, infectious diseases, etc.). (source: <http://www.who.int/mediacentre/news/releases/2004/pr92/en/> (accessed:15.10.2018)). In the flood wave, besides other infrastructures, water purification plants and sewage systems are often damaged, resulting in a lack of drinking water due to contamination of existing sources and supply facilities. An additional problem is the endangerment of human health due to the spread of infectious diseases that are transmitted through water (typhoid, cholera, giardia, diarrhea, cryptosporidiosis, etc). From the above it can be seen that floods are a very serious security problem that needs to be resolved and should be approached with the same seriousness.

## **2.2. Earthquakes**

There is almost no part of the planet Earth in which it was not felt, stronger or weaker, the trembling of the soil, which caused unrest and fear among people. Earthquake or quake (tremor) occurs due to the movement of tectonic plates or of Earth's crust, and the result is Earth's crust trembling because of releasing large amount of energy. Tectonic plates are yearly shifting 2 to 3 cm, but earthquakes, on the other hand, occur very often. Contrary to the widespread belief that these are rare, they occur very often, but their greatest number is of low intensity and occurs on relatively small surface areas of the land or the ocean floor. On earth's surface, earthquakes can be manifested as shaking or dislocating the soil. Sometimes, they can provoke a tsunami, a devastating sea wave. The earthquake happens due to the stagnation of the tectonic plates, resulting in the stress of the rock-mass, and the moment when the strain becomes so much that the rocks can not withstand, it results in breaking and slipping along the fault. Earthquakes can occur naturally or as a result of human activity. Smaller earthquakes can also be caused by volcanic activity, slipping of soil, explosions and nuclear tests. In the broadest sense, the word earthquake is used to describe any seismic event - whether it's a natural phenomenon or a human-induced event - which generates seismic waves. Earthquakes are among the most horrifying natural catastrophes that are happening on Earth, and for this reason they have attracted the attention of mankind since forever. Therefore, data on earthquakes can be found in records thousands of years old. However, significant earthquake investigations have taken place only since the 19th century. (source: <https://sr.wikipedia.org/sr-el/Земљотрес>, accessed: 16.10.2018.).

### *2.2.1. Earthquake - definition*

Earthquake is the oscillation of soil particles caused by natural or artificial causes. It is consequence of freeing Earth's internal energy. For the set of all seismic phenomena, the common name seism is used. Seism or earthquake are sudden and short tremors of parts of the Earth's crust. An earthquake is the process of kinetic energy release on some celestial body. A quake on our planet is called an earthquake. It happens in the Earth's lithosphere or directly below, in the next layer of the so-called asthenosphere and mantle, which makes up most of the Earth's mass. A part of the kinetic energy dissipated through a lithosphere is called seismic energy and is measured in seismic observatories (cells). In most earthquakes, seismic energy is proportional to total kinetic energy. That's why for most of the needs surface observatories are sufficient; and besides surface ground-based observatories there are underground-based observatories and underwater observatories. Release of the energy can be continuous, when we talk about a slow earthquake that can last for years, or apparently at the moment, when the earthquake usually lasts less than one minute. Earthquakes can be natural, ie. arising due to the action of the force of nature, or artificial caused by human activity, e.g. detonation of explosive

devices. The causes of earthquakes on other celestial bodies do not have to be of the same origin as on Earth. Therefore, from the standpoint of physics, it is justified to use the term earthquake exclusively for Earth, and term quake for all celestial bodies. Thus, quakes in other celestial bodies in scientific literature are called to that body, for example, those on the Moon are called moonquakes. In the English speaking field, however, the use of the term quake as a shortcut for earthquakes is also common. The science that deals with the study of earthquakes and related processes is seismology and is based on direct measurements. The science that studies quakes on other celestial bodies is astroseismology and is mainly based on indirect observations. An example of this is the observation of the acoustic properties of the Sun gases, since acoustic waves are essentially kinetic energy waves propagating through gases, e.g. in the atmosphere. In the solar system, quakes are caused by chemical reactions in gaseous celestial bodies, that is, tidal forces and strong volcanic activity in rocky bodies.

### *2.2.2. Types of earthquakes*

Earthquakes, according to the way of becoming, are divided into natural and artificial. Natural earthquakes can, furthermore, be divided into spontaneous and induced. Spontaneous earthquakes are those that occur due to the movement of lithospheric plates, and are also called tectonic earthquakes. The group of natural occurring earthquakes include volcanic and collapse earthquakes. Tectonic earthquakes are generated by the release of seismic energy in the Earth's crust. They are created under the influence of large pressures in rock-masses of the Earth's crust, most often caused by the movement of larger blocks of the Earth's crust. This leads to a sudden fracture of rock-mass, which is accompanied by elastic deformations of surrounding rock-masses, which then spreads into space in the form of seismic waves. Causes of movement in the lithosphere are convection currents occurring in the asthenosphere. On that occasion, the colder magma descends from the upper parts, and from the lower parts towards the surface pushes a warmer magma (similar to the boiling process of the water), which leads to the expansion of the ocean floor. The lithosphere is divided into several plates, which interact with each other, collide and disperse. Passing by of tectonic plates develops near the expansion zones, although it does not always have to be tied to them. In these zones, quakes are very common, because the asthenosphere is cooled and firm, high viscosity. Plates disintegration occurs most often on the ocean floor, while there are only two examples of land dispersal - Iceland and East Africa. Along these borders, the quakes are less frequent, as the asthenosphere is still thin and low viscosity. The subduction of plates is developing in the areas of collision of ocean and/ or continental plates. The plates are already hardened and cooled, so the earthquakes here are the most common and strongest. (<https://sr.wikipedia.org/sr-el/Земљотрес>, accessed: 16.10.2018.). Volcanic earthquakes arise as a result of the movement of magma in the fields of modern volcanoes. They are in direct contact with powerful volcanic eruptions and explosions of volcanic gases and steams. Collapse earthquakes arise as a result of the collapse of the vaults and edges of large caves and underground facilities. They usually occur in terrains built of limestone, gypsum and other rocks, subject to light destruction in which caves of different dimensions are formed. Artificial (anthropogenic) earthquakes occur due to the activity of man, or his action on the natural environment. The most common example of such activities can be tracked in areas where large artificial accumulation lakes are formed, where so-called earthquakes are formed. To the group of artificial earthquakes belongs the seismic activity also, stimulated by pumping water into deep boreholes (for example, for needs of the exploitation of geothermal energy from the Earth's interior). (source: <https://sr.wikipedia.org/sr-el/Земљотрес>, accessed: 16.10.2018.).

## 2.3. Hurricanes

There is almost no man in a civilized world who has not heard of tropical storms in the US, Asia, or Australia. These tropical storms attract special attention due to their destructive action, destroying by their own strength the objects of infrastructure, human settlements, but also taking human lives.

### 2.3.1. Hurricane - definition

A tropical cyclone (cyclone, hurricane or typhoon) is a meteorological phenomenon on Earth consisting of rapid winds and a lot of rain. Hurricanes can last for several days or weeks and are common in eastern USA, Southeast Asia and northern Australia. Contrary to the media inscriptions about strong winds that destroy everything in their way, hurricanes on the mainland are a much weaker wind than our bora, although in the coastal region they have a greater destructive power due to the rise of the sea level. A tropical cyclone is a rapidly rotating storm system characterized by low pressure center, strong winds, and a spiral arrangement of thunderstorms that produce strong rain. Depending on its position and strength, a tropical cyclone has names such as hurricane, typhoon, tropical storm, cyclonic storm, tropical depression, and simply, a cyclone. Tropical cyclones typically form over large areas of relatively hot water. They perform their energy from the evaporation of water from the surface of the ocean, from which the clouds and rain are formed by condensation, when the humid air is raised and cooled to saturation. This energy source differs from mid-latitude cyclonic storms, such as northeastern and European storms, which are primarily fueled by horizontal temperature contrasts. The strong rotating winds of the tropical cyclones are the result of the conservation of the angular momentum caused by the rotation of the Earth, when the air flows towards the rotation axis. Consequently, they are rarely formed in the 5 ° belt around the equator. Tropical cyclones typically have a diameter in the range of 100 and 4,000 km. The term tropical refers to the geographical origin of these systems. They are almost exclusively formed above the tropical seas. The word cyclone is derived from their circular nature, with the wind blowing counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. The opposite directions of circulation are the result of the Coriolis effect. In addition to strong wind and rain, tropical cyclones can produce high waves, devastating stor floods, and tornadoes. They typically quickly weaken over the land, where they are cut off from their primary source of energy. For this reason, the coastal regions are particularly vulnerable to damage caused by tropical cyclones in contrast to the inner region. Heavy rains, however, can lead to significant floods in the interior, and storms can produce extensive coastal floods up to 40 km from the coast. Although their impact on human populations is usually devastating, tropical cyclones can dampen drought. They can also take heat energy from the tropics and transfer it to landscapes with a more temperate climate, which can play an important role in regional and global climate modulation. (source: <https://sr.wikipedia.org/wiki/Uragan> accessed: 19.03.2019.). The power of action and destruction of the hurricane is measured by the *Saffir-Simpson Hurricane Wind Scale*, which clearly shows all the strength of this natural phenomenon. According to this scale, hurricanes are divided into categories:

- Category 1 - wind 119-153 km/h.
- Category 2 - wind 153-177 km/h.
- Category 3 - wind 178-209 km/h.
- Category 4 - wind 210-249 km/h.
- Category 5 - wind stronger than 249 km/h.

According to the offered categorization of hurricane, we can see all the seriousness of the hurricane as a security threat to people and their property.

## 2.4. Tsunami

Tsunami or harbour wave is another natural disaster that affects human society bringing enormous consequences. Understanding the very nature of the tsunami and its occurrence has remained incomplete until the 20th century, but to this day too much about the tsunami has remained unknown. The main directions of the research of this natural disaster endeavor to determine the reasons why some, recorded, large earthquakes generate tsunamis and others, which are visibly, significantly, smaller, trigger its formation. Also, significant efforts are made in trying to accurately predict the occurrence, start-up and passage of tsunamis through the oceans and ways of their destructive action on shores and coastal areas.

### 2.4.1. Tsunami - definition

Tsunami (from Japanese: 津 “tsu“ = harbour 波 “nami“ = wave) is harbour wave or, in free translation, *tidal wave* or *seismic sea wave*, denotes the occurrence of large waves, of large kinetic energy, with destructive mechanical effects on the coast. These waves are caused by moving large volumes of water, generally in the ocean or in a large lake. Earthquakes, volcanic eruptions and other underwater explosions (including underwater nuclear detonation), landslides, glacier separations, meteorite strikes and other disorders above and below the water surface - all have the potential to generate tsunamis. Unlike normal ocean waves generated by the wind, or tidal waves arising from the gravitational pulling of the Moon and the Sun, the tsunami is caused by the displacement of water. Tsunami waves do not resemble normal underwater currents or sea waves, since their wavelength is far greater. They do not look like breaking waves, but initially resemble a rapidly rising tide, which is why they are often called *tidal waves*, although the scientific community does not approve that term, since the tsunami does not have tidal origin. The tsunami generally consists of a series of waves with a period of several minutes to several hours, arriving in the "internal wave array". Waves that are high more tens of meters can arise in case of major events. Although the impact of tsunami is limited to coastal areas, their destructive power can be enormous and they can affect the entire oceanic pools. (source: <https://sr.wikipedia.org/wiki/Цунами>, accessed: 19.03.2019). The most famous tsunami, of course, is the one generated in the Indian Ocean in 2004, and it is among the most severe and deadliest natural disasters in human history, with estimates at least 230,000 dead or missing in 14 countries that have exit to the Indian Ocean. Also known is the tsunami caused by a powerful earthquake that hit Japan in March 2011. Tsunami, generated by the earthquake, damaged the facilities of the Fukushima nuclear plant, where explosion and leaking of radioactive material occurred. It is believed that an earthquake and tsunami killed about 16,000 people, while about 2,500 people are missing. Another tsunami, which hit the Indonesian island of Sulawesi, was no less dangerous. According to the Indonesian National Emergency Agency and Indonesia's Emergency Service, about 1,700 people were killed, about 600 people were seriously injured, while around 17,000 people were evacuated. All of the above data sufficiently speak of the dangers caused by this disaster to people and their property.

## 3. NATURAL DISASTERS AS A FORM OF A SECURITY THREAT

Natural disasters are "blame" for the deaths of hundreds of thousands, even millions, of people around the world. There are even more of those who are left without a roof over their heads and resources needed for living. There are many disasters caused by natural processes, and some also by human activities, which significantly affect the safety of people. In addition to several of the listed natural disasters, it is necessary to mention: volcanoes, landslides, rockfalls, fires, avalanches, etc. And, as can be seen from the previous text, they are all serious factors of the threat to safety of people and material goods. However, if weather conditions are viewed and perceived as a serious security threat, regardless of the causes of the occurrence, it is necessary to distinguish three components.

Weather disaster, by itself, is a significant security threat that significantly affects the endangerment of the lives of people and their property. It is often the case that one natural disaster is followed by the others, which are no less dangerous and devastating than the one that hit the area first. For example, after a devastating earthquake, landslides or floods may occur, which additionally aggravates already, and even so, a grave security situation that has already been seriously damaged. Due to the destruction of the natural disasters and the destruction of human settlements, a large number of people are left homeless and without basic living conditions. As an accompanying phenomenon, there are contagious diseases that further endanger the lives of people. In addition to the destructive effect of natural forces, as a primary component that endangers human lives, it is also necessary to recognize the second, secondary, security component in natural disasters, which is related exclusively to human activities. So there is another threat to people and their property, and it is nothing less significant than the primary danger. Various criminals-opportunists who use the resulting turmoil and reduced attention in order to gain material benefits appear in the vulnerable area. As a possible security threat, caused by their actions, there are plunder of property, burglaries in housing and other objects, various frauds and even murders. This component is therefore more represented due to the resulting turmoil, but also because of the occupancy of security and other services, which are mainly engaged in the rescue of human lives and material goods, and this component can often be ignored and underestimated. In order to eliminate the security threat contained in this component, the most responsible security agencies are, above all, the police, who need to make plans and have an adequate response to such a security threat and to act in such situations, and to establish effective control over the area affected by natural disaster. Similarly, the cooperation of security agencies with citizens, the action of emergency services and other factors can greatly contribute to the increased level of security of people and their property in the area affected by the disaster but also to prevent the activities of criminal groups or individuals who want to benefit from the situation. This would reduce the impact of the secondary security component to a minimum. When generating some natural disasters, and especially those that are not the result of regular and common natural processes, but are more of a consequence of global climate change, global warming and warming, climate change, etc., it is necessary to draw attention to the third, tertiary, safety component, and which is very important for the safety of people. Natural disasters often destroy, in their destructive activity, both human settlements and wildlife habitats. It is precisely this tertiary danger to people that comes from the asocial and deviant behavior of wild animals that, due to the destruction of their natural habitats and sources of food, are often forced to share their living space with people and this is where the conflict arises. These conflicts can be fatal to both humans and animals. The cause of the deviant behavior of animals can be climate change itself, the disappearance of some plant and animal species, and the result is, again, a conflict between humans and animals that may result in fatal consequences.

#### **4. CONCLUSION CONSIDERATION**

From all of the above, it can be concluded that weather accidents are a very important and serious security threat for both people and their environment. Weather disasters are rarely predictable and it is even more difficult to prevent them. Some of the natural disasters can be predicted, and in this way we can act preventively and readily, and reduce the consequences for human life and material damage. In some countries, there are seismological centers for soil and earthquake monitoring, but in some situations it is almost impossible to predict the occurrence of a weather accident and preventive action. In these situations, emphasis is placed on saving human lives and remedying the resulting damage caused by the destructive force of nature. According to the World Health Organization (WHO) and other sources, it is evident that natural disasters have endangered human lives, their property and infrastructure facilities, almost as a

war or the use of weapons of mass destruction. It speaks enough about the power of natural disasters and their security threat. In addition, it is necessary to focus attention on other factors that affect safety and are listed in this paper as a secondary and / or tertiary threat or component. The operation of these factors to safety, although not at the same level as the primary threat, can not be ignored. Also, it should be noted that some disasters can also be artificially induced, i.e. their occurring is a product of human activity. This primarily refers to the demolition of dams that can cause a flood wave and flood the settlements and infrastructure that are located downstream. Nuclear tests under the surface of the ocean can cause tsunamis, which destructiveness should not be doubted. In addition, a significant security threat is the combination of two or more natural disasters, and their synergy is even greater and more dangerous threat to the security of people and their goods. None natural disaster, either individually or in combination with another one, is not negligible and is a serious security problem and should be treated as such. As the folk proverb says: "Trouble never comes alone".

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## TRANSITION TO CIRCULAR ECONOMY

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### ABSTRACT

*Existing economic models have primarily looked at the use of resources from the point of rationalizing their consumption and reducing human needs, although they have been increasing. Consequently, it is necessary to build such economic model that will be supportive in designing activities on renewable resources, which are observed from the economic, social and natural bases. In such a constellation, the so-called circular economy, is that new model, which is based on three principles: waste design and pollution reduction, maintenance of products and materials in use and regeneration of the natural system. The significance of the circular economy model and the care of implementation is also reflected in the fact that in 2014, WEF published a report "Towards the Circular Economy: Accelerating the scale-up across global supply chains", and the European Commission in 2015 adopted the Circular Economy Action Plan, which was fully completed in 2019, although its activities continue. The assumption is that the transition of society to the circular economy strengthens and accelerates the construction of sustainable economic development, strengthens the global competitiveness and opens the new jobs.*

**Keywords:** *circular economy, sustainable growth, renewable sources, economics model*

### 1. EVOLUTION OF ECONOMY

Samuelson A. Paul and William D. Nordhaus point out that the economy as the science, is studying how societies use rare resources in the production of goods and how it is distributing among different groups (Samuelson, Nordhaus, 2009, p.4). According to Alfred Marshall's, economy examines humanity in ordinary economic life, while according to R. Lipsey economy is the study of the use of scarce resources in order to satisfy unlimited human needs (Josifidis, 2012, p.19). On the other hand, Robins L. simply sets the definition of the concept of economy with the notion that it is a science of alternative use of rare resources. (Josifidis, 2012, p.19). According to Kukoleča, the economy represents a concrete economic reality, which is composed of economically relevant elements, and in which the events should be carried out, either by economic laws, or by economic principles (Kukoleča, 1990, 293). Lipsey states that the economy deals with the allocation of social resources to alternative use and the distribution of social products to the groups and individuals, with changes in production and distribution over time and efficiency, or inefficiency of economic systems (Jakšić, Pejić, 2001, p. 375). According to Stojanović, economy as a science is finding the methods that are in use in the processes of economic activities of people which enables successful management of a home, enterprise or national or global industry. (Stojanović, 2002., p.5). Milanović has a similar attitude, that the economy is studying the operation of general laws in the production, distribution, exchange and consumption of the national wealth, as well as the relations among people in those processes. (Milanović, 2009, p.39). From another aspect, Jonathan M. Harris argues that the standard environmental economy relies on microeconomics theories, which are

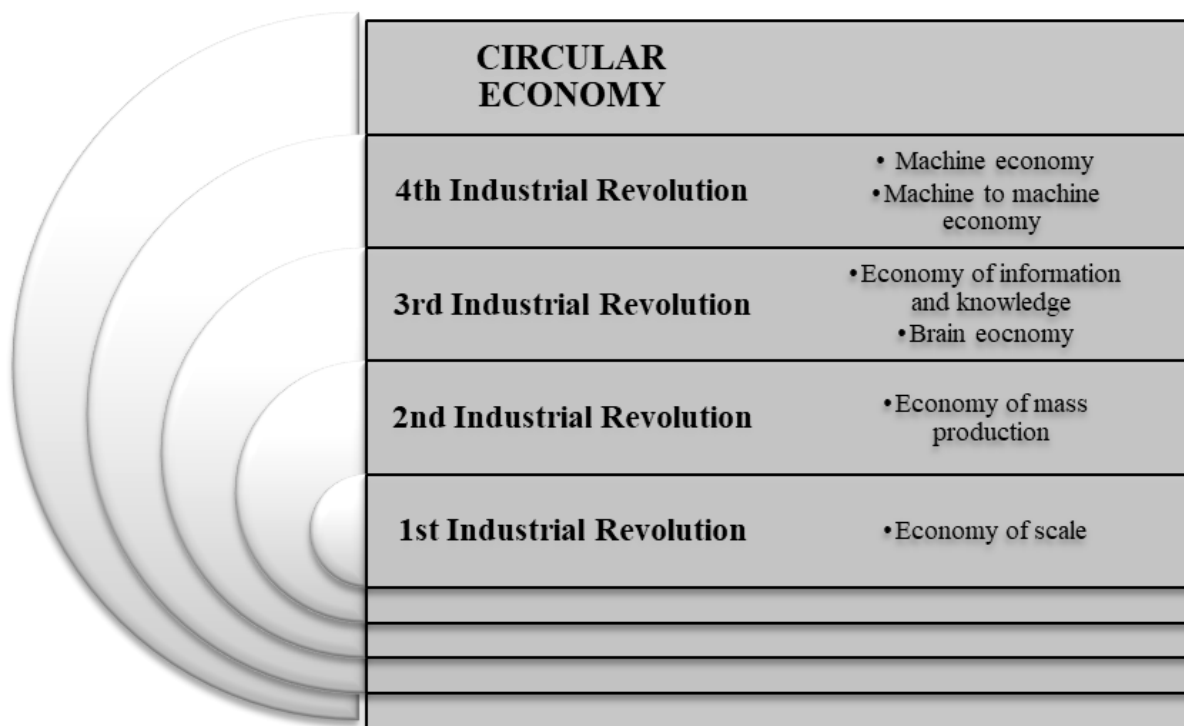
involving individual issues of resources and the environment, while macroeconomics theory puts the economic system into a wider ecological context, and it deals with the mutual relationship of economic growth and ecosystem (Jonathan, 2009, p.10). Based on the different approaches to define economy as a science, it is evident that there is a necessity for economists and the whole society to deal with the sustainability of the economy, which implies a normative notion of the way people should act in terms of nature and their mutual and towards future generations responsibility (Baumgärtner, Quaas, 2009., p. 445-450). Responsibility is even greater when we look at major climate change, loss of biodiversity, global water crisis, air pollution, land and many other manifestations of global environmental changes. The connecting fact in different views of economists about economy as a science is the adequate use of resources, finding methods, defining the strategy of using resources, whose basic characteristic is scarcity. Economic activities, which include production, consumption, exchange and distribution, have a significant impact on the environment, climate change, soil, water, air, ecosystem quality. Therefore, it is important to define the best way to carry out basic economic activities, finding the best combination of benefits and costs in the process of generating goods that gain their value on the market, while at the same time there is a rational use of scarce resources. The large consumer society is the image of today's society. We are facing the negligible consumption of everything, from natural resources to goods that gain its value on the market. Economic prosperity is based on the use of natural resources and their adaptation to human needs. However, on the one hand, excessive consumption is evident and, on the other hand, insufficient investment in renewal is also highlighted. That can lead us to extremely bad effects. Making a rational decision to use scarce resources and activities to protect and improve the environment is the key of the success in the economy as a science and their creators in practice. The twenty-first century brought with it a new form of economy, especially emphasizing the brain economy. (Dragičević Radičević, Nestorović, 123). There is evident availability of a greater volume of information about products, market, instruments of economic policies, economic problems, innovations of national, regional, international significance and all that are resulting in a greater scope of needs and desires of each individual. Because of this there is a situation of scarcity in which good in relation to the wishes and needs of the society is limited. Solow states that measures of efficient use of resources in economic activities must not exclude resources other than labor. In this context, he said that there is a very small difference between labor, capital and land on the one hand, and air and water on the other. Every resource is scarce. The use of any of the above resources may create an opportunity cost, due to the non-use of another resource (Gollop, Swinand, 2001, p. 587-608). According to custom, capital still has its dominance. There is a very deep division between those who have, and those who do not have enough capital for their own needs. Some countries were, however, a complete surprise for the economic scene, achieving strong economic growth. Some countries stand out for certain comparative advantages, while others are subordinate to the dominance of capital. So, there is a question why the countries that are at different levels of development cooperate with each other? The answer is very simple. Cooperation is based on the need for what one has, and others do not have access, and above all, it refers to the extent of resources. Everything that is important for satisfying basic human needs comes from nature. The great importance is the manner of man's behavior to nature, that is, the way of carrying out various economic activities. Therefore, it is necessary to consider different attitudes regarding the definition of economy as a science, as well as different approaches of economists to natural resources.

## **2. CIRCULAR ECONOMY - SOCIETY VS. ECONOMIC (R)EVOLUTION**

Observing the evolution of society, it is clear that determinants have caused a change in economic relations. Initial economic activity was based on consumption in terms of satisfying the individual's existential needs, in the way of appropriating parts of nature.

So, we had production conditioned by consumption, without distribution and exchange. The evolution of man and society has also evolved economic activity, including the economic principle of the exchange on the basis of scarce resources (in some ways, this phenomenon can be viewed through the prism of comparative advantages and the opportunity cost of the classical economy). With the development of society, the creation of cities, the creation of fundamental forms of capitalist organization, economic activity also includes its fourth pillar named distribution, as a product of creating surplus value. The first industrial revolution and industrialization in the economy puts the primate on the production and distribution, where in both cases the capitalist is viewed as a central subject, not the worker as a creator. Economy is facing with growing efficiency in production, but also unjust distribution. Additional significance in the function of generating surplus value, and unjust distribution, entails also the money as a means of exchange, which brings an indirect and time-delayed role in the exchange, and in that way creates a new benefit for the capitalist (Nestorović, Dragičević Radičević, 2018, p.204-210). Electrification as the primary product of the second industrial revolution, contributes to the creation of mass production and opens up a spectrum of new innovations. Thus, besides production, the effects of economic distribution and exchange activities are accelerated. Internationalization also allows the growth of consumption, which points to the fact that at the beginning of the twentieth century the society and the economic constellation of relations within it are significantly changing. What is still imperceptibly at the beginning, however, is the fact that social relations are changing evolutively and economic changes are accelerating, and therefore the negative effects in the relations of the four basic activities are more and more revolutionary with far reaching consequences. In this context, it is important to emphasize that economic activities are being realized as the activity of individuals with different interests and goals, so it is clear that these changes are entering the sphere of growing confrontations, which consequently have a negative impact on the society as a whole. In this constellation of the relationship, by chance or not, increasing attention is focused on an attempt to "replace" human potential in the economy. In this way, the third industrial revolution was formed, which evolutively brought the development of information technology and hence the economic model based on this concept. This model was based on innovations through the IT sector. A positive aspect was the awareness of human potential in creating innovations, therefore, in response to this fact, it was formed the economy model of the so-called „brain economy“. The negative aspect is the fact that it is an intermediary in the creation of artificial intelligence and a system based on it, which again seeks to exclude an individual in economic flows, but with fresh demands in consumption. By digitizing, as the fourth industrial revolution, we entered the "machine era". The fourth industrial revolution and innovations in modern technologies through digitization, artificial intelligence, block-chain technologies have brought the new forms of economy based on virtuous determinants, which are manifested, among other things in virtual organizations, by new forms of money, such as the crypto currency and virtual communications, but also communication between machines, without the presence of a human being. Depending on the intensity and degree of human involvement in these processes, we can talk about two models of economy: the economy of machines and machines to machine economy (Dragičević Radičević, Stanojević, Nestorović, 2018. p.252). Creators of the economic environment in different countries, at different levels of development, have a dilemma in which way to preserve the available scarce resources in addition to increasing the needs of each individual and whether it is possible to define a new form of economy without scarcity. Namely, the lack of scarcity implies infinity, which is invisible to the whole world. The world is unthinkable without human needs, as is the unimaginable world without the economy and its basic activities. Base activity - production has become a necessity for centuries backwards. Better production, better satisfaction of needs, better utilization and preservation of their own resources will have those entities that have more capital.

Long ago, capital has its domination, its logic is very complex, and it can again be reduced to three words: - maximizing the profit. In order to this logic be possible or successful, it is necessary to respect the economic principles, that is, to use the available information in an efficient and effective manner and rational decision-making, without or with a minimal threat to natural resources. Definitely, on the side of the society, it is possible to define a multi dilemmas and to create more principles, on which use it is insisted, and on the side of nature there is only one unique principle - rational use and preservation of natural (scarce) resources. This simple principle is based on the reproducibility of materials, raw materials, the preservation of resource resources and renewal, the elimination of chemicals and waste, the regeneration of natural systems. Also, the economic basis of this principle is to keep semi-products and products in the life cycle of production, which reduces the amount of waste, and increases the savings of resources, time, energy, financial resources, which are diverted to human resources education and job creation, which certainly it is in favor of defining an adequate economic environment of a country. Such a definition represents a newly created form of economy - a circular economy.



*Figure 1: Correlation between industrial revolutions and economic evolution  
(Source: Authors)*

Digitization and the fourth industrial revolution enabled the emergence of a new form of economy, which we called the machine economy. In this model of economy, is also the emphasis on rationalization in the function of increasing the degree of efficiency and effectiveness of economic activities. However, what needs to be emphasized is that the machine economy primarily deals with the issues of rationalizing the consumption of available resources, but not about creating new ones. In that sense, it is necessary to redefine the economic model and create one that will look at rationalization of consumption from the perspective of reducing human needs, but supporting the design of activities on renewable sources, which are observed from an economic, social and natural basis. Then we can talk about the so-called.

The Circular Economy, which is based on three principles (The Ellen MacArthur Foundation, 2019.):

- waste designing and reducing pollution
- Maintenance of products and materials in use
- Regenerating the natural system

The concept of a circular economy is based on the principle of the circulation of matter in the ecosystem, taking into account the importance of all economic activities at all levels, from individual, through local to the global. In the circulation of matter, each activity and each factor are equally important and in function of efficiency, regardless of size or distribution. Thus, in the circular economy, it is necessary to establish a circular, sustainable and return system of all factors in order to project a rational, efficient, effective and, thus, a long-term sustainable model. Digitization and its implications have created the new models in the economy, such as the economy of machines and the whole system have been shifted to a long-term non-linear model, in which the basic factors of production: labor, land and capital, have new dimensions such as machine operation, intelligence, dematerialization, 3D robotics and technology, virtual money, etc. The circular economy model supports two systems simultaneously. On the one side we have a technical system that restores existing products, materials through recycling processes, and on the other we have a biological system, which natural materials through composting and anaerobic processing are returning to nature. (The Ellen MacArthur Foundation, 2019.) These processes have been enabled by digitalization.

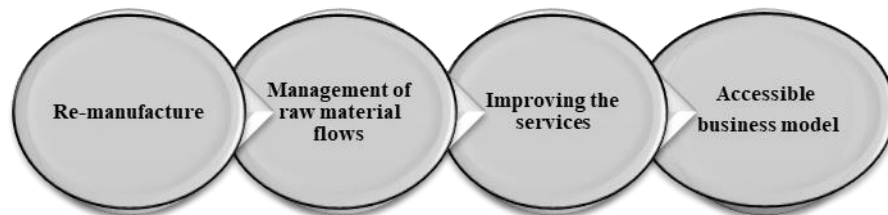
### **3. THE IMPORTANCE OF CIRCULAR ECONOMY - A GLOBAL VIEW**

The significance of the transition to a circular economy is also reflected in the 2014 World Economic Forum Report entitled "Towards the Circular Economy: Accelerating the scale-up across global supply chains." In the given Report, the circular economy is seen as a concept that is a response to global economic and complex relations in the creation of sustainable development. This concept of the economy should respond to the complex requirements of society and economy in the 21st century in a way that will reduce the risks of increasing consumption and irrational spending of resources, creating new consumer demand, greater elasticity of products and new materials (Ellen MacArthur Foundation and McKinsey & Company, 2014., p.10). In the report, several key determinants that support the concept of circular economy are listed (Ellen MacArthur Foundation and McKinsey & Company, 2014., p.10):

- The circular concept fosters wealth and employment generation against the backdrop of resource constraints
- Circular supply chains are up and running— and they've gone global
- Supply chains are the key unit of action, and will jointly drive change
- Defining materials formulations is the key to unlocking change
- Four materials categories are prime candidates for demonstrating viability
- Catalyzing a series of "Trigger Projects" is the most effective way to reach tipping points for each category
- Tangible outcomes can be achieved in two years through joint action

Defined determinants point to the fact that linear growth in consumption has reached its limit and that in certain sectors of production, such as food, metal, non-food, etc., prices are unrealistic. The report cites an example of the Renault Company, which adopted the principle of a circular economy (Ellen MacArthur Foundation and McKinsey & Company, 2014., p.10):

- Re-manufacture - which means that the existing parts are repaired and sold on the market at lower prices of 50-70% of the basic price. In this sense, the demand for engaged labor is growing.
- Management of raw material flows - which involves the use of those raw materials for which the economic and technical value will be preserved over a longer period of time
- Improving the service - which involves creating such a relationship with suppliers in which there would be a circular benefit, for example not buying, but a service model.
- Accessible business model - built by Renault through the example of renting batteries for electric cars, in order to raise the level of use, but also to recycle, monitor and control.



*Figure 2: Renault Company - Principles of Circular Economy (created by authors)*

In support of the significance of the concept of circular economy is also the European Commission's Initiative to accelerate the implementation of this concept, and the adoption of the EU Action Plan in 2019. The spectrum of areas that are the subject of determining the concept of a circular economy in this plan is complex but also open to all countries that support it.

#### 4. CONCLUSION

The circular economy is a response to the acceleration of the negative effects that are the products of revolutionary movements in society and economy, from the first industrial revolution to the present. It is a response to the demand for sustainable development. Its concept is supported by a regenerative system, primarily, the economic system, but also to the social system, and directly appoints to the use of renewable energy sources, eliminating the polluters of the natural environment. Also, its concept provides the opportunity to create innovative new product design and business models in general, which is supported by the example of Renault, which integrated the principles of circular economy into the their model of business, from re-manufacture, flow management of input or raw materials, by creating a special relationships with business associates in which there is a circular benefit, to the construction of an innovative business model of access ownership. In this way, production and consumption can again be in the same function of efficiency, viewed through the rationality of using resources in the function of satisfying human needs with a high degree of technological possibilities of the new era. Industrialization, electrification, artificial intelligence, digitization, blocking technology and similar products of industrial revolutions have led to the redefinition of the economic model and the creation of such an economic model that will look at rationalization of consumption by providing support for designing resource recovery activities rather than from the point of reducing human needs. Such an economic model is precisely the circular economy. Through a theoretical research and approach of the evolution of society and economy as a science, the newly defined models of economy, as well as through a brief example of practice by Renault, we can conclude that the appointed hypothesis: the transition of the society to the circular economy strengthens and accelerates the construction of sustainable economic development, strengthens global competitiveness and opens new jobs, has been confirmed.

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## DIGITAL BANKING TRANSFORMATION - DEVELOPMENT AND USE OF ELECTRONIC BANKING IN SERBIA

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### **ABSTRACT**

*Technology development has created the conditions for globalization of business. The main goal is to connect the client as quickly as possible and flow of information regardless of geographic distance. Electronic banking is the execution of business processes with the use of electronic technologies. Electronic technology represents the combined use of information technologies and telecommunications. In the other words banking services are delivered over the internet. Responding to the challenges of the digital era, banks have integrated advanced technologies into business, developing e-banking through the Internet and mobile applications. This study is focused on the development of e-banking in Serbia. The aim of the research is to determine the extent to which electronic banking is used today in Serbia, points out the advantages and disadvantages, as well as the importance of its development, which will have an impact on the improvement of banking services. Modern banking requires well-organized information system and computer literacy of the nation. This is a government and society issue, and not just a matter of particular banks. Banks should offer customers a fast, easy, reliable and cost effective way of doing business – access to their accounts and credit cards, electronic payments (excluding fees if possible) and popularize this kind of business which is a benefit for both, clients as well as banks. A large number of people in Serbia still adapts to this type of business, while a number continues to use traditional services. Numerous surveys show that there is still room for further improvement and development of e-banking.*

**Keywords:** *digital banking, e-business, electronic banking, financial services, ICT*

### **1. INTRODUCTION**

Over the last decades, technological development has transformed the banking industry. The modern bank transforms traditional business (bank counter service and contact with clients), into electronic business through the use of various electronic channels. The client has services 24 hours a day, 7 days a week and the bank operates 365 days a year without increasing the number of employees. In today's world, money becomes mostly electronic and mostly used with payment cards, while paper money is becoming less represented. A modern electronic technology allows sending a huge amount of information at great distances over a short period of time. In this way, companies save on operating costs, perform their tasks more efficiently and provide a better market position than competitors. In Internet banking, access to the account is enabled through the browser, so there is no need for special software. The growing popularity of the Internet has created an environment in which Internet banking is becoming a mass consumer product. As internet banking offers the possibility for a user to access his account and conduct transactions from anywhere, it is necessary to provide a high level of security. Numerous researches show the importance of the informatics literacy of the population, education and better information. For the expansion of e-banking banks are primarily responsible through their cooperation with clients, but it is also necessary to increase the involvement of the state.

This paper closely determines the level of use of electronic banking in Serbia, completes existing researches and points to the importance of electronic banking and its further development.

## 2. ELECTONIC BANKING

Electronic banking provides banking services and products by using an electronic technology. In conditions of very strong competition, financial organizations are under constant pressure to retain users of their services, reduce costs and use technology as a source of competitive advantage. The primary goal of implementing the electronic payment system was to solve the problems of the paper-based payment system, using the benefits of information technology. Financial transfers through the Internet open up new opportunities and benefits for customers and banks, but require adoption of new knowledge and technologies. Electronic banking is beneficial for the customers as it is faster, provides 24/7 services irrespective of the location, easy access to account details and reduction of long queues. It is also efficient and cost-saving for banks. For the normal functioning of electronic banking, a good information system, good network infrastructure and information protection are needed.

### 2.1. Differences between Traditional Banking and Internet Banking

In traditional banking, it takes time to go to banks, as well as to spend time in waiting, filling out forms, etc. For online banking, it takes only time to log in to the internet bank and time to conduct a banking transaction. The following table explains the differences in detail.

*Table 1: Differences between Traditional Banking and Internet Banking  
(Accountlearning.com)*

<b>Basis of Difference</b>	<b>Traditional Banking</b>	<b>Internet Banking</b>
<b>Presence</b>	Banks exist physically for serving the customers.	Internet banks do not have physical presence as services are provided online.
<b>Time</b>	It consumes a lot of time as customers have to visit banks to carry out bank transactions like — checking bank balances, transferring money from one account to another.	It does not consume time as customers do not have to visit banks to check bank balances or to transfer money from one account to another. Customers can access their account readily from anywhere with a computer and internet access.
<b>Accessibility</b>	People have to visit banks only during the working hours.	Internet banking is available at any time and it provides 24 hours access.
<b>Security</b>	Traditional banking does not encounter e-security threats.	Online banking is the tempting target for hackers. Security is one of the problems faced by customers in accessing accounts through internet.
<b>Finance Control</b>	Customers who often travel abroad cannot pay close attention and control of their finances.	Customers who often travel abroad can have greater control over their finances.
<b>Expensive</b>	Customers have to spend money for visiting banks.	Customers do not have to spend money for visiting banks. They can avoid bank charges that may be charged for certain teller transactions or when they pay bills electronically — directly from their account to the merchant. It helps to save money on postal charges.
<b>Cost</b>	The cost incurred by traditional banks includes a lot of operating and fixed costs.	Such costs are eliminated as the banks do not have physical presence.
<b>Customer Service</b>	In traditional banks, the employees and clerical staff of the bank can attend only few customers at a time.	In online banking, the customers do not have to stand in queues to carry out certain bank transactions.
<b>Contact</b>	Customers can have face to face contact in traditional banking.	Customers can have only electronic contacts.

## 2.2. Advantages of electronic banking

Electronic banking is the cheapest way to conduct banking transactions. Fees for banking services in e-banking are lower than those in traditional banking. With an e-banking, a marketing service can focus on individual clients. There are many advantages and the most significant are shown in the figure below.

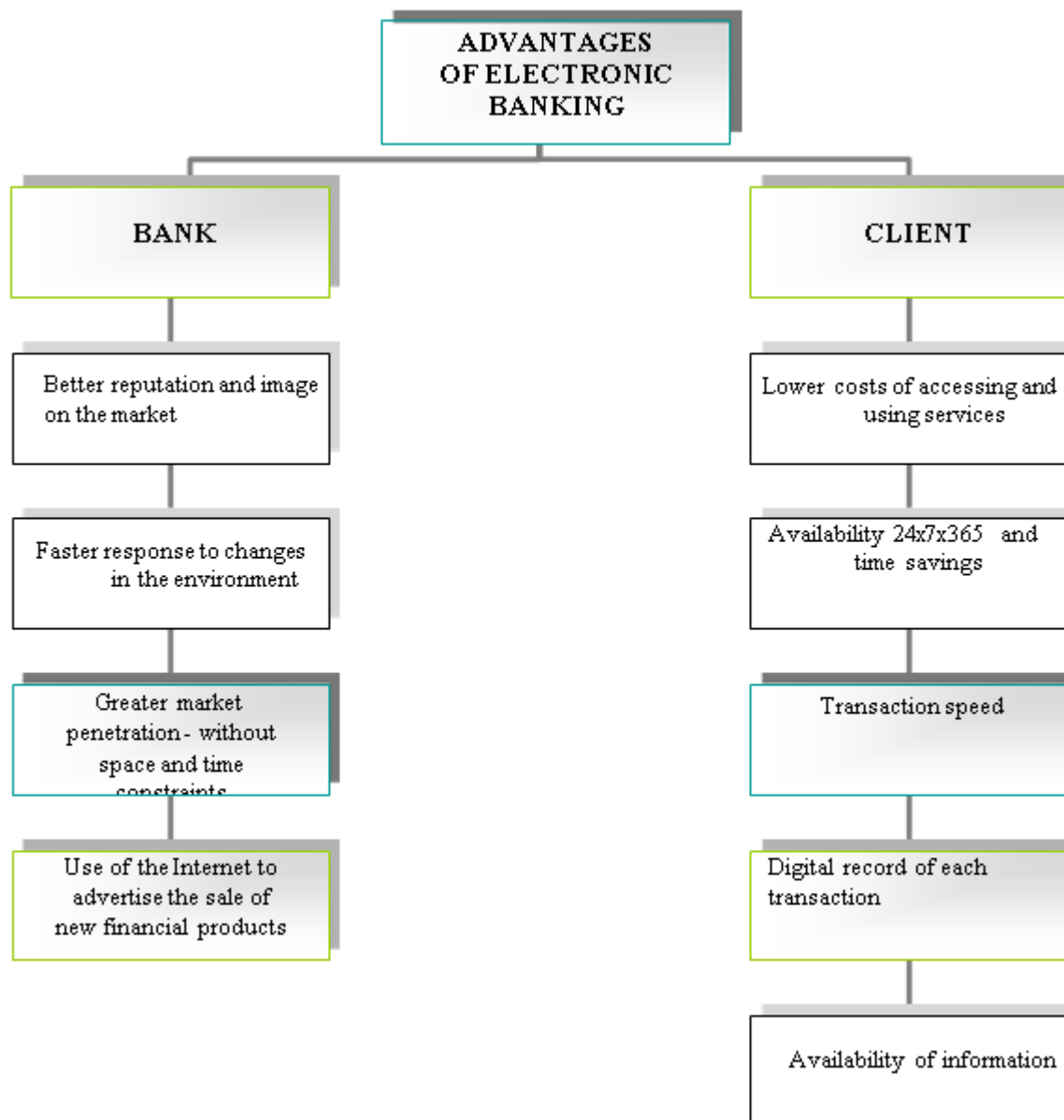


Figure 1: Advantages of using electronic banking (Authors, 2019)

## 2.3. Disadvantages of electronic banking

The disadvantages of Internet banking are mostly expressed in the absence of security in business performance, legal regulation, lack of privacy, lack of interest in innovation and danger of abuse. Absence of security - Security systems are a major problem on the Internet, because the greater numbers of users, the greater the number of programs that attack computers and systems. Legislation - The current legislation represents a certain obstacle to the further development of electronic banking, as legal areas are not regulated from the entire domain of E-business, which would enable faster development of electronic services. Global character - Electronic money freely circulates worldwide and it is impossible to control it by central

authorities authorized for cash flows in one country. Transnational money can lead to the instability of the global monetary system (the problem of taxation of profits, destabilization of exchange rates and impact on the stability of the economy).

### 3. E-BANKING IN SERBIA

In Serbia, e-banking has been present since 2003 with the transfer of payment transactions from the Clearing and Payments Service (called ZOP) into banks. E-banking is not popularized enough due to citizens' lack of trust in Internet business and insufficient information. Therefore, it is necessary to work on computer literacy and better information. Some regulations still do not allow the complete transition to this channel, given that certain transactions require the sending of documents in scanned form or even physical delivery. There is still low awareness of the benefits that e-banking provides, so the degree of use is lower. As one of the measures that would significantly influence the faster penetration of e-banking services among individuals, is certainly education that the state has to implement in cooperation with banks. According to previous research results, almost half (46%) of Internet users believe that traditional banking is safer than internet banking. A significant number of users (49%) feel at risk when performing financial transactions via the Internet. It is therefore important that banks invest in technology that will provide security.

*Table 2: Report on the number of Internet and Mobile banking users from 2014-2018  
(National Bank of Serbia)*

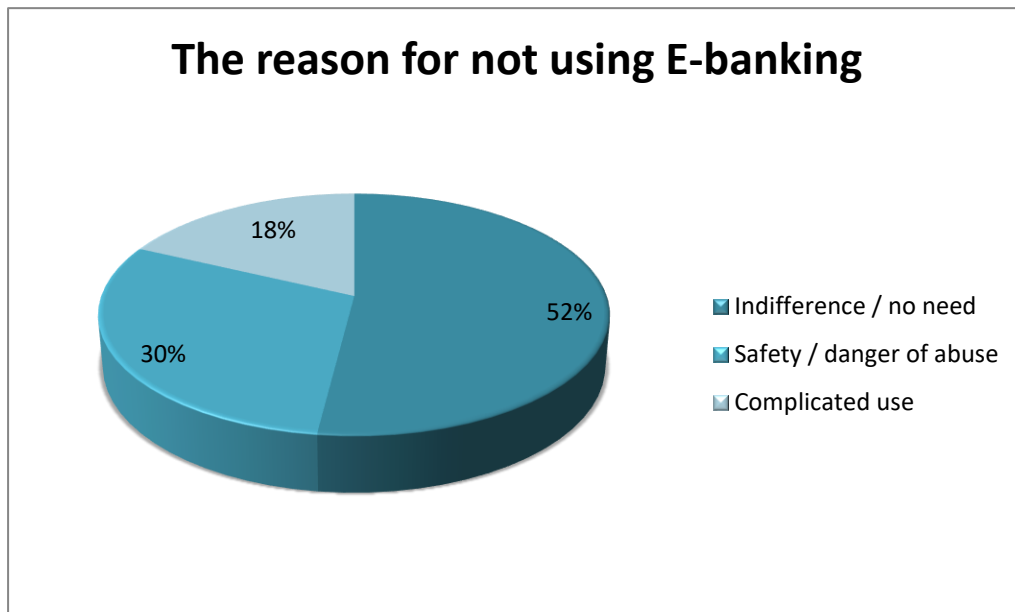
Year	Internet banking	Mobile banking
2014	1,153,611	179,724
2015	1,421,885	464,167
2016	1,618,357	746,180
2017	1,935,687	1,126,930
2018	2,465,904	1,426,825

Most people accept innovations and new products with a certain degree of distrust and lack of interest. The main obstacle of e-banking usage is the fear of data abuse and the main motivator is saving time. Regardless of the fact that banks in Serbia have implemented e-banking services a long time ago, many citizens are still waiting in line to pay their monthly obligations.

### 4. RESEARCH RESULTS

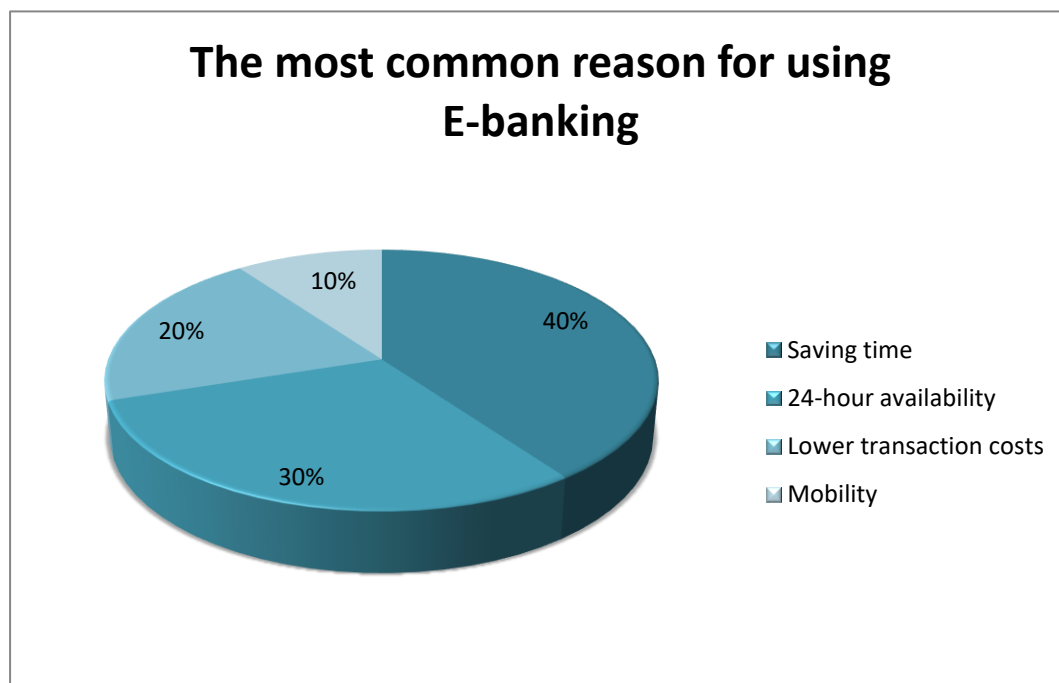
We conducted the survey about e-banking on a random sample of 120 respondents in Belgrade. The answers were received on the 12 questions from the questionnaire in the period from March 20<sup>th</sup> to April 20<sup>th</sup>, 2019. Based on the insight into the following charts, some general conclusions can be made. More than a half respondents (58%) use e-banking. And it is most common in the age group of 30-45 years, among high educated and employed. The most frequent level of usage is weakly. Respondents found out most about e-banking in the bank i.e. from banking officers. It tells about the good engagement of the bankers in promoting this type of service. Non-users are the young, the less ICT-literate and the elderly. More than half of them (56%) have the intention to use e-banking in the future, which represents potential users.

*Figure following on the next page*



*Chart 1: The reason for not using E-banking (Authors, 2019)*

42% of the total numbers of respondents do not use electronic banking. The most common reason is that they do not have enough interest, knowledge or need for it (52%). The other reasons are safety or danger of abuse and complicated use. The result shows the lack of information among respondents who would probably show greater interest if they knew the benefits of e-banking services. When clients recognize the advantages of electronic banking, they will hardly return to the traditional way of using banking services.



*Chart 2: The most common reason for using E-banking (Authors, 2019)*

The most common reason for using e-banking is saving time (40%) and 24 hour availability of the service (30%). Time savings are very important in a modern environment. And in our research it has proven to be the most important advantage of electronic banking.

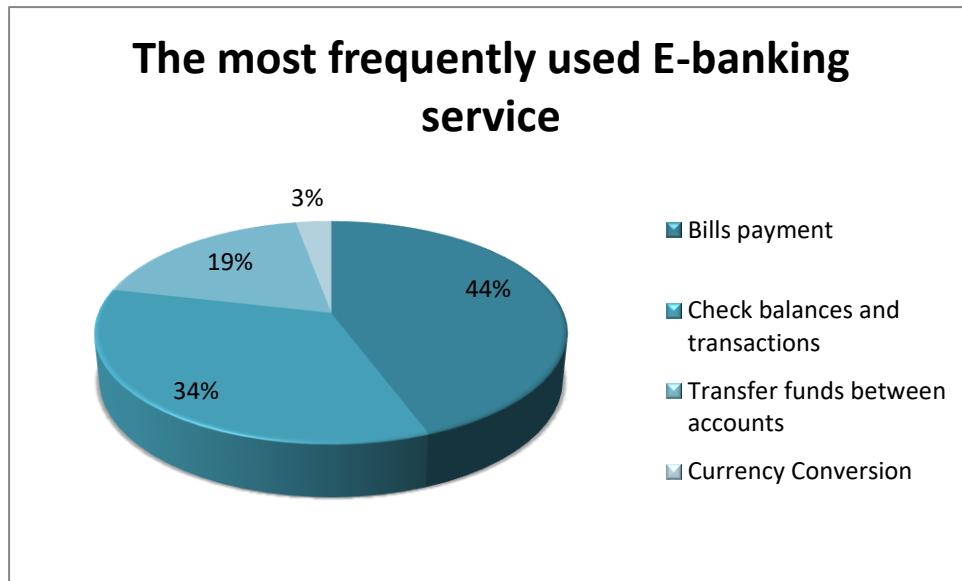


Chart 3: The most frequently used E-banking service (Authors, 2019)

Respondents answered that they mostly pay bills (44%), and then check balances (34%). The reason for the most frequent use of payment services is that banks have made the most favorable conditions for this type of transaction. They generally do not offer a favorable exchange rate for currency conversion and therefore this service is less represented. The advantages are many, but it seems that for now, the most important for clients is financial saving.

## 5. CONCLUSION

Electronic banking in Serbia exists since 2003, but it was progressing slowly and it was not developed as much as it could be. In the use of the benefits of e-business, financial institutions or banks have made the most progress. This trend can be attributed to the foreign banks that have entered our market and transferred some good practices from their home markets. The state has begun to solve this problem by passing the Law on Electronic Signature; by incorporating electronic business into the National Strategy for the Development of the Information Society, as well as by launching an electronic administration and electronic health project. In addition, there is a need for a secure information infrastructure and high-speed Internet at competitive prices. The digitization process of Serbia's banking sector is in progress, supported by an increasing use of mobile devices. With the increasing use of smartphones, mobile banking has the potential to become widespread (as shown in *Table 2*). This trend is very logical since there are many more bank clients with mobile phones than those with a computer with internet connection. It is very important that banks emphasize the advantages of e-banking to clients (e.g. time saving, mobility, 24 hours availability) as well as benefits (e.g. lower fees, favorable exchange rate). It is also necessary for state to implement electronic public services. Such public services can speed up changes in user habits and contribute to the development of e-banking. Based on all of the above, we can conclude that the higher the level of electronic literacy of citizens, the greater use of electronic banking can be expected.

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## FOREIGN DIRECT INVESTMENT AS A FACTOR OF IMPROVING ECONOMIES RUSSIA AND SERBIA

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### ABSTRACT

*The current financial situation as a result of the global economic crisis has had a major impact on foreign direct investment (FDI) in Russia and Serbia. The dimensions of the national economy, such as packages to attract FDI, the competitiveness of the Russian and Serbian economy compared to countries in the region, have a great impact on attracting them. The authors in the paper they are exploring FDI and their improving on the economies Russian and Serbian.*

**Keywords:** *Foreign direct investment, the global economic crisis and economy*

### 1. INTRODUCTION







The current financial situation as a result of the global economic crisis had a major impact on foreign direct investment (FDI), in the world and in Russia and Serbia. Tax incentives, stimulus packages, and eased bureaucracy are just some of the measures that economies use to attract FDI and are competitive in relation to others. The authors explore the FDI in Russia and Serbia, and their impact on the development of the economies of these countries.

### 2. ECONOMIC INDICATORS

The global financial crisis originated in the United States (US) in 2007 spread to the entire world. The same is started with turmoil in the housing market, the expansion of credit risk, which resulted in problems and high prices of petroleum products. For the first time in history such enormous decline in living standards in one state did not lead to the collapse of the socio-political system. Although the global financial crisis began in the United States it has spread and swung the whole world. Immediately afterwards, like a boomerang, crisis is slowly overtaking Serbia. All aforementioned affected primarily the slowdown in the economy of the Russia and Serbia. No matter what the impact of the crisis on the world economy was in 2008, immediately followed in Russia and Serbia it is disclosed in: The additional increase in unemployment; Reducing the already low volume of exports; The reduction in foreign investment; Reducing the volume of industrial production; The reduced purchasing power of the population; and declining living standards and increasing poverty. At the Table 1, the authors provide an overview of the main economic indicators of the Russia in 2017 and 2018 that give a cross section of the economy in the Russia.

*Table following on the next page*







*Table 1: Russia - Economic Indicators in 2017 and 2018*

Overview	Last	Reference	Previous	Range	Frequency	
GDP Growth Rate	-0.38 %	Dec/17	0.04	-5.4 : 4.1	Quarterly	
Unemployment Rate	5 %	Mar/18	5	4.8 : 14.1	Monthly	
Inflation Rate	2.4 %	Mar/18	2.2	2.2 : 2333	Monthly	
Interest Rate	7.25 %	Mar/18	7.5	5 : 17	Daily	
Balance of Trade	12192 USD Million	Feb/18	16991	-203 : 20356	Monthly	
Government Debt to GDP	12.6 %	Dec/17	12.9	7.4 : 92.1	Yearly	

Source: <https://tradingeconomics.com/russia/indicators>

At the Table 2, the authors provide an overview of the main economic indicators of the Serbia in 2017 and 2018 that give a cross section of the economy in the Serbia

*Table 2: Serbia - Economic Indicators 2017 and 2018*

Overview	Last	Reference	Previous	Range	Frequency	
GDP Growth Rate	0.6 %	Dec/17	1.6	-13.3 : 6.9	Quarterly	
Unemployment Rate	14.7 %	Dec/17	12.9	11.8 : 25.5	Quarterly	
Inflation Rate	1.4 %	Mar/18	1.5	0.1 : 14.9	Monthly	
Interest Rate	3 %	Apr/18	3.25	3 : 18	Daily	
Balance of Trade	-514 USD Million	Feb/18	-409	-1364 : -161	Monthly	
Government Debt to GDP	61.5 %	Dec/17	71.9	28.3 : 201	Yearly	

Source: <https://tradingeconomics.com/serbia/indicators>

According to data collected by the authors of the work there, the macroeconomic picture shows moderate economic growth of the Russia and Serbia, with the reduction of macroeconomic imbalances. On the economic trends and the prospects of this economy in the medium term will greatly affect the movement and prospects in the international economic environment, primarily in member countries of the Euro zone as its Russian and Serbian partners in trade and investment. Both economies have plenty of investment benefits FDI's.

### 3. METHODS AND STATISTICAL MATERIAL

Data for this paper was obtained from the database of The World Bank, UNCTAD, Tradingeconomic and other relevant research papers. The analysis also included figures about FDI inflow and outflow for Russia and Serbia, which were examined from 2008–2016.

### 4. RESEARCH RESULTS

The FDI analysis in the observed economies aims to determine the extent to which FDI's represent a positive factor in the growth economy and what are the previous experiences. As a result of globalization, the main processes of integration into the world economy, with the same goals: endless accumulation that does not know the borders and the national economy, maximizing the profits and efforts of the richer and more powerful countries to increase their wealth by using natural and human resources to other countries<sup>1</sup>. FDI's can be understood as part of the overall development strategy of individual countries, especially in the function of technology transfer, industrialization and economic growth, but also as a unique modality of internationalization of operations.

<sup>1</sup> Mitrović R., Ljubić M., 2014, Globalization and its impact on contemporary banking in transition countries, International Journal of Mathematical Models and Methods in Applied Sciences, 2014.

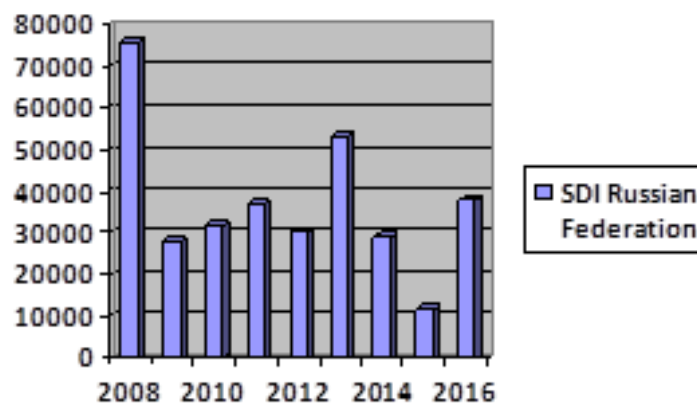
Because of their specificity, shown in the practice of other countries, they can be viewed as a modality of particular importance and significance for further growth and recovery of the economy.<sup>2</sup>

*Table 3: Foreign direct investment in Russian Federation: Inward and outward flows and stock, annual, 2008-2016, US Dollars at current prices in millions*

YEAR	2008	2009	2010	2011	2012	2013	2014	2015	2016
ECONOMY									
Russian Federation	75855.7	27752.26	31667.97	36867.77	30187.66	53397.14	29151.66	11857.81	37667.63

Sours: <http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>

*Figure 1: Graphic representation of table 3*



At the Table 3, we can see the amount of FDI in Russia varies yearly. For the years 2008 it was about 75855.7 millions USD. Following the crisis, the value gradually reduced from 2008 to 2012 to 3 millions USD yearly. In 2013, there is a spike and the total amount was almost 53397.14 millions USD. From 2013 to 2016 investments have gradually increased and for 2016 the amount is about 4 millions USD.

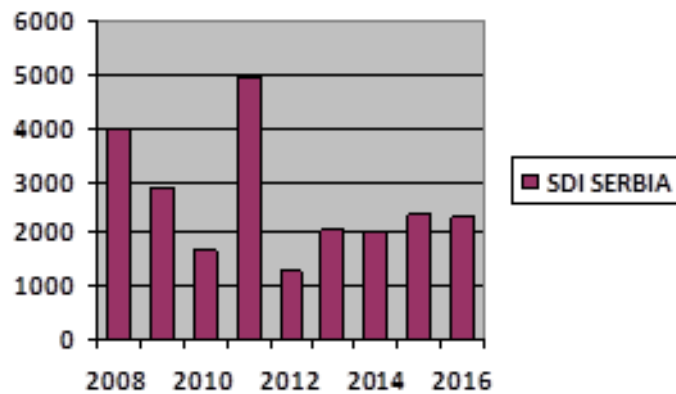
*Table 4: Foreign direct investment in Serbia: Inward and outward flows and stock, annual, 2008-2016, US Dollars at current prices in millions*

YEAR	2008	2009	2010	2011	2012	2013	2014	2015	2016
ECONOMY									
Serbia	3971.856	2896.059	1686.106	4932.253	1298.568	2052.528	1996.138	2346.639	2298.782

Sours: <http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>

*Figure following on the next page*

<sup>2</sup> M. Ljubić, (2011), Foreign Direct Investment Južnog Banata as a Major Force of Globalization of Economic Integration in Serbia, International Scientific Conference "Strengthening the Competitiveness and Economy Bonding of Historical Banat – SCEBB" 2011, SCEBB 2011, Vršac, septembar 2011. godine, Zbornik radova str. 109-114.

*Figure 1: Graphic representation of table 4*

At the Table 4, we can see the amount of FDI in Serbia varies yearly. For the years 2008 it was about 4 millions USD. Following the crisis, the value gradually reduced from 2008 to 2011 to 2 millions USD yearly. In 2011, there is a spike and the total amount was almost 4 millions USD. From 2011 to 2016 investments have gradually increased and for 2016 the amount is about 2 millions USD.

## 5. CONCLUSION

From the analysis of FDI trends and dynamics of Russian and Serbian economies were derived the following conclusions and recommendations: The countries are attractive for investors because of the favorable geopolitical location, strong positions on big markets, the macroeconomic and financial stability and because of low taxes and low labor costs for a skilled labor force. That is why advertising the country's potential for economical development is a key component to successful attraction of funds. And successful attraction of funds in the form of FDI is a key factor for improving economies.

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# OCCURRENCE AND DEVELOPMENT OF THE WORLD TRADE ORGANIZATION IN THE AGE OF GLOBALIZATION

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## **ABSTRACT**

*The World Trade Organization (WTO) is an international economic organization representing the institutional and legal framework of the multilateral trading system in the areas of customs and trade in goods and services. It is the largest economic international organization in the world. The basic goal of the WTO is to achieve sustainable growth and development of the economy, general well-being, the liberal trading environment, and contribution to achieving better cooperation in the conduct of the world economic policy. The WTO deals with the regulation of trade relations between the participating countries by providing a framework for negotiating trade agreements and a dispute settlement process with the aim of enhanced participatory compliance with the WTO agreements, signed by representatives of member governments and ratified by their parliaments. Its importance for conducting international trade in goods and services is extremely high. The WTO promotes free world trade, which should result in increased international trade flows, profits for businesses, the population and society as a whole. The headquarters of the organization is in Geneva (Switzerland) and has a total of 159 member states. WTO member states renounce national sovereignty in the conduct of foreign trade policy in order to secure the benefits arising from membership. The WTO has four functions: the first function is the application and supervision of multilateral and pluralateral trade agreements that form the WTO Agreement, the second is the oversight of national foreign trade policies, the third is the settlement of foreign trade disputes, and the fourth is to serve as a forum for multilateral foreign trade negotiations. One of the tasks of the WTO in the future is to play an active role in regulating the process of globalization of the world economy so that this process would not be uncontrolled. However, the effects of international liberalization are often not evenly distributed among the countries of the world and the different strata of the population, and the WTO suffers sharp criticism. This organization is most often a target of anti-globalist movements.*

**Keywords:** *anti-global movement, foreign trade policy, international economic organization, member states, trade*

## **1. INTRODUCTION**

The World Trade Organization is the largest international economic organization in the world. The World Trade Organization (abbreviation WTO) is an international organization representing the institutional and legal framework of the multilateral trading system in the areas of customs and trade in goods, services and intellectual property. Its importance for conducting international trade in goods and services is extremely high. The World Trade Organization is promoting free world trade, which should result in increased international trade flows, profits for businesses, the population and society as a whole. Member States of the World Trade Organization denounce national sovereignty in the conduct of foreign trade policy in order to secure the benefits deriving from membership of the World Trade Organization. However, the effects of international liberalization are often not evenly distributed among the countries of the world and the different strata of the population, and the World Trade Organization suffers sharp criticism. This organization is most often a target of anti-globalist movements. Bearing in mind that the processes of globalization intensify in the world economy and that international trade becomes the most important activity of the world economy, with the knowledge that the World

Trade Organization is one of the most important factors in these processes, my work is the research of the World Trade Organization, from the organizational and international legal views in the age of globalization.

## **2. ESTABLISHING A WORLD TRADE ORGANIZATION**

The World Trade Organization was established and officially began its work on 1 January 1995. The headquarters of the organization is in Geneva (Switzerland) and has a total of 159 member states. The CEO of the organization is Roberto Azevedo (since 2013).

### **2.1. What is the World Trade Organization**

The World Trade Organization is the legal and institutional basis of a multilateral trading system. The World Trade Organization deals with the regulation of trade relations between the participating countries by providing a framework for negotiating trade agreements and a dispute settlement process with the aim of enhanced participatory compliance with the WTO agreement, signed by representatives of member governments. It sets out the basics of contractual obligations that determine how governments should formulate and apply domestic regulations in the area of foreign trade. The reasons for establishing the World Trade Organization are:

- Great economic crisis of the 1930s
- Protective trade policy (high customs and non-tariff barriers in trade, discriminatory agreements between individual countries) - drastic reduction of imports on a global level,
- The Second World War - the realization that economic recovery is impossible without the opening of the market and the liberalization of trade, and the increase in the volume of international trade impossible without stable and predictable trade exchange rules (harmonized by a large number of countries).

The World Trade Organization is an international organization that has all the necessary elements in order to be able to classify it: the states as founders and typical members, the international treaty as the founding act, the permanent organs implementing the provisions of the Statute, the specific field of activity, the status of a legal entity and subject of international law. The scope of activities of the World Trade Organization is multilateral agreements in the field of commodity trade (GATT), trade in services (GATS) and trade aspects of intellectual property rights (TRIPs). The World Trade Organization is a labor regulator of the Government of the countries. The World Trade Organization budget, based on data from 2011, is about 196 million Swiss francs. It has about 640 members who are employed within this organization.

### **2.2. World Trade Organization sources and historical view**

The failed attempt to create the International Trade Organization (ITO) in 1948. as one of the Bretton Woods institutions resulted in the accession of 23 countries to the General Agreement on Tariffs and Trade (GATT). GATT operated through 9 rounds of negotiations, and through 4 the WTO was established: the Dillon Round (1960-1961), the Kennedy Round (1964-1967), the Tokyo Round (1973-1979) and the Uruguay Round (1986-1994). GATT countries have triggered trade liberalization and the removal of protectionist measures in the commodity trade, a multilateral trading system is in fact a prosperous and prosperous, which in 1995. grew into the World Trade Organization. The formal establishment of the WTO stems from the Uruguay Round in Morocco. The Marrakesh Declaration is based on the WTO as an international organization that contains: a General Customs and Trade Agreement, but extended its jurisdiction to two new areas: Trade Services (GATS) and Intellectual Property (TRIPS).

### **2.3. Why is it important to become a member of the World Trade Organization?**

First, if you are not a member, discrimination of your goods and services may occur when you try to export them to member states. However, if you are a member, you can participate in the application of clearly defined rules in order to protect their trade rights and to compensate for the damage caused by incorrect commercial practices of other countries. Second, and more importantly, the liberalization of trade by applying the principles of the World Trade Organization leads to the growth of the competitiveness of the domestic economy, the scarce domestic resources are more efficiently used, foreign investment increases and accelerates the transfer of technology, which undoubtedly contributes to achieving the path of sustainable growth. The World Trade Organization currently has 159 members, covering over 95 percent of goods and services worldwide. The number of members, as well as the active efforts of other countries to become members of the World Trade Organization, best shows how important it is for this organization.

### **2.4. Principles of the World Trade Organization**

The World Trade Organization is, as a rule, considered to be a body concerned with the reduction of customs protection in Member States and the elimination of non-tariff barriers. In fact, the World Trade Organization insists on a comprehensive trade liberalization, which is a much wider concept. It implies that a Member State in the exchange of goods and services should comply with a whole set of principles. These principles are:

- Reducing the level of protection (reduction of customs barriers)
- Non-discrimination (national treatment, status of the most privileged nation)
- Transparency (clear and unambiguous procedures and rules on the market)
- Strengthening competition (equal match, privatization and foreign trade liberalization)

Consistent implementation of the rules of the World Trade Organization is the most effective means of breaking domestic monopolies in the industrial products sector. It should be noted that the World Trade Organization has no mechanisms that can force members to change foreign trade policy. The World Trade Organization is the only place where members negotiate and negotiate new trade agreements.

### **2.5. Functions of the World Trade Organization**

The first function of the World Trade Organization is the application and supervision of multilateral and pluralateral trade agreements that form the World Trade Organization Agreement. The first group of agreements in the World Trade Organization: reduction of customs and non-tariff barriers in the international trade of certain goods, (easier access to the market of member countries), agreement on trade in agricultural products, (tariffs, elimination of subsidies), agreement on textile products, discrimination against non-members, and preparations for membership of the World Trade Organization. Second group of agreements in the World Trade Organization: unification of legal norms, trade-related investment measures agreement, service trade agreement (GATS), trade agreement on intellectual property. The third group of agreements in the World Trade Organization: regulation of key foreign trade procedures and agreements on: anti-dumping, technical barriers to trade, customs value, pre-delivery controls, rules of origin, import licensing procedures, protection system, sanitary and phytosanitary measures. An attempt is made by governments to provide investors, employers, employees and consumers with a business environment that will promote trade, investment and job creation, as well as lower prices on the market. Such an environment must be stable and predictable, especially when it comes to investments. The most important elements of this WTO agreement covering the field of trade in industrial products are the following: customs become the only legitimate instrument of protection policy, the application of non-tariff measures is

basically prohibited, and the average customs rate on imports of industrial products of the developed country will gradually decrease from 6, 3% to 3.9%, duty-free imports in the total imports of developed countries will increase from 20% to 44%, the most favorable nation and national treatment clauses will remain valid. The second function of the World Trade Organization is to oversee national foreign trade policies. Members must regularly report to the World Trade Organization on measures, policies and laws in the area of foreign trade, and the World Trade Organization itself analyzes and reports on the foreign trade policies of its members. The aim of the supervision is that the foreign trade policies and practices of all members are transparent and accessible. The third function of the World Trade Organization is the resolution of foreign trade disputes. No member of the World Trade Organization may take unilateral actions against countries that violate the rules of the World Trade Organization, but must contact the appropriate body of the Organization. Otherwise, there would be "trade wars." The fourth function of the World Trade Organization is to serve as a forum for multilateral foreign trade negotiations. It should be known that the rounds of negotiations on customs concessions and other issues similar to those within GATT continue within the framework of the World Trade Organization. The additional functions of the World Trade Organization may include the technical assistance and training it provides to less developed countries in their efforts to approach the standards of modern international trade, rich publishing activity and the publication of statistical views on various aspects of international trade. The last function of the World Trade Organization is to cooperate with other international institutions in creating a global economic policy. Global economic policy implies directing global trade flows by international economic organizations. To that end, the World Trade Organization is co-operating with the International Monetary Fund and the World Bank.

## **2.6. Contributions by the World Trade Organization**

The initial losers of liberalization, and transition in general, are certainly social and state-owned firms that are at the margin of profitability, with a surplus of employees and without big looks, that they will ever be equally included in the market game. What makes the first phase of transition painful is that in the first phase of the reform real winners become the only oligarchs and insiders who profit most in an unregistered institutional framework, and their power is reduced only when, or if liberalization and privatization are accompanied by strengthening discipline (ie the judiciary and the rule of law) and creating a favorable investment climate. In this process, the role of the World Trade Organization is irreplaceable in addition to helping to create a transparent and competitive environment, a commitment to faster entry into the World Trade Organization and the EU. When the rates are lowered, or competition is suppressed in some other way, or if policies, procedures and rules are not applied transparently and systematically, or if some suppliers have better treatment than others, the effects of trade liberalization can easily be omitted. The World Trade Organization requires countries in the accession process to have, before gaining membership, a necessary basis in the legal system, capable of supporting the World Trade Organization agreements that regulate all areas that have direct or indirect influence on foreign trade. The World Trade Organization is not an institution of free trade, as it allows customs and, in limited cases, other forms of protection. The World Trade Organization is a system oriented to open and fair competition. Non-discrimination rules are designed to preserve fair trading conditions, as well as rules on dumping and subsidies. Over 3/4 members of the World Trade Organization are developing countries and countries in the process of economic reforms towards market systems. This trend has shown that it is not true that the inter-national system exists only for developed countries. Developing countries have shown that they are ready to take on most of the obligations that are being sought from developed countries. However, they have been given a transitional period to adapt to the toughest commitments, as well as the assistance of developed countries to less developed

countries. All countries, even those poorest, have the potentials: human, industrial, natural, financial, which can be started for the production of goods and services for the domestic and international market. "Comparative advantage" means that countries are progressing in exploiting their potentials by concentrating on what they produce best. Many companies are aware that the market is bigger, they are more likely to achieve more efficient sales and access to a larger number of consumers.

### **3. WORLD TRADE ORGANIZATION AS AN INTERNATIONAL ENTITY**

#### **3.1. World Trade Organization as an international organization**

Each international organization has the following constituent elements: the state as the founder and the typical member, the international treaty as the founding act, the permanent organs implementing the provisions of the statute, the precisely defined field of activity and a special status, which implies that the organization has the status of a legal entity and that it is a subject of international law. The broadest-defined area of activity of the World Trade Organization is the international trade relations of the member states of this organization. The creation of the World Trade Organization was due to the fact that its members had common interests in the field of international trade for the realization of joint actions of several states. The field of activity of each organization is related to the goals for which the organization was founded. Accelerated economic growth in Member States as well as achieving full employment and reducing the number of war conflicts are also indirect targets.

#### **3.2. The World Trade Organization as a subject of international law**

As much as it is accepted that international organizations are subjects of international law for member states, it is in theory that the international legal subjectivity of organizations applies in relations with non-member countries, that is, the organization exists objectively for the entire world. The most important elements of the international subjectivity of international organizations are: the enjoyment of rights and obligations in accordance with international law, independent action in relation to third parties and the organization's organization to the member states. These rights and obligations are practically realized as the following forms of international subjectivity:

- the privileges and immunities of the organization (privileges of the organization itself, privileges and immunities of the organization's officials and the privileges and immunities of the representatives of the member states in the organization),
- the ability of the organization to conclude international agreements and regulate the rules of the organization (who can sign an agreement on behalf of the organization, it concludes contracts with international organizations and states),
- jurisdiction of the organization (territorial and personal jurisdiction),
- other aspects of subjectivity (the right of mission, the right to convene conferences, etc.).

##### *3.2.1. Membership of an international organization in another*

Indicator of international subjectivity - when deciding, each member state has one vote. Many other international, intergovernmental and regional organizations, including the United Nations and its specialized agencies, have observer status at the meetings of the World Trade Organization bodies. Organizations that have observer status at the General Council meetings of the main executive body of the World Trade Organization are: the United Nations, the Food and Agriculture Organization, the United Nations Conference on Trade and Development, the World Intellectual Property Organization.

### *3.2.2. Independent operation of the organization in relation to third parties*

In the performance of their duties, the Director-General and the staff of the Secretariat shall not seek or receive instructions from any government or any authority outside the World Trade Organization. The autonomy of the organization vis-à-vis Member States is reflected in the existence of the will of the organization, separated from the will of its members. Creation of this will is influenced by the decision-making process and the nature of the decisions taken within the World Trade Organization.

### **3.3. Financing of the World Trade Organization**

The World Trade Organization budget was financed at the outset by the Member States' national contributions. Subsequently, the World Trade Organization received its own resources: customs duties, agricultural products and VAT bases, etc., by the participation of the World Trade Organization member countries in proportion to the size of their gross domestic product in the function of adjusting revenue and budget expenditures. Harmonization of the World Trade Organization budget can not be carried out by taking loans in the capital market, so the missing funds must be directly provided by Member States. These funds represent the main source of funding. Among other things, the World Trade Organization collects resources from its own sources: income from fees, interest... The Director General of the Committee on Budget, Financial and Administrative Affairs of the World Trade Organization is assessing the annual budget and financial position for each business year. The World Trade Organization should adopt financial provisions to determine: scales of contribution to the budget of each member; measures to be taken against Member States that do not pay their contributions to the World Trade Organization budget on time. The budget is charged from the contributions of Member States and other revenues. Each Member State is required to participate in the costs of the work of the World Trade Organization by paying contributions to the World Trade Organization budget. The future amount of each member's contribution will be calculated on the member's participation in the total trade in goods, services and intellectual trade of all members of the World Trade Organization. Other revenues include different interest rates on assets owned by the World Trade Organization, revenues from renting space and revenues from the sale of World Trade Organization publications. Expenditures and expenditures of the World Trade Organization can be divided into: compulsory and non-compulsory expenditure. The largest part of the World Trade Organization budget in the last few years is spent on two items: agriculture and rural development and underdeveloped regions.

### **3.4. The future of the World Trade Organization**

One of the tasks of the World Trade Organization in the future is to play an active role in regulating the process of globalization of the world economy so that this process would not be uncontrollable. While foreign assistance can help in the short term, treatment for poverty will require much more. Countries that have experienced the greatest economic prosperity have opened their doors to international trade and investment in the following way:

- by establishing regulations that encourage trade,
- guaranteeing the rule of law and
- by joining other governments in trade agreements.

What is the future of her future?

- reaffirmation of World Trade Organization authority in trade issues,
- resolving trade disputes through negotiations, not through litigation,
- further reduction or abolition of customs tariffs,
- Modernization of customs procedures,
- Lowering protectionist barriers in agriculture,

- Further liberalization of trade in services, including the movement of professional staff,
- harmonization with the principles of foreign direct investment,
- Ensuring that environmental protection agreements comply with trade regulations,
- permanent removal of import duties from the electronic economy,
- reaffirmation of access to labor standards through the International Labor Organization and general support and protection of the free movement of goods, services, capital and ideas among states and peoples.

Equally dramatic progress is made in information technology with the aim of helping people of all countries to create, process, store and share financial data, manufacturing specifications and other information relevant to economic activity within the state and between countries. Also, severe measures are needed to protect intellectual property: ideas, methods, words and images of modern commerce.

### **3.5. Critique of the World Trade Organization**

Insisting on free international trade, the World Trade Organization, has gradually captured the world in the last ten years. However, the liberalization of international trade brings much more benefits to the most developed countries, and it virtually prevents countries in the middle, and especially at the lowest level of development, to develop industries. The liberalization of international trade in agricultural products would benefit developing countries and countries in transition, but developed countries, contrary to the World Trade Organization's commitments, are doing everything in their power to disable or delay them. They do similarly when it comes to liberalizing the entry into their market of construction companies from developing countries and countries in transition. Thus, the liberalization of international trade in products and services is done primarily if it is the interest of developed countries. The main criticism relates to wealthy countries for using the World Trade Organization for their personal interests and ignoring the necessity of taking action to pull the poorest countries out of poverty. Hypocrisy and broken promises that have damaged the credibility of the World Trade Organization have led, inter alia, to protests and violence in trade negotiations in Seattle and Cancun. The democratic legitimacy of international financial institutions (such as the IMF, the World Bank) is highly questioned, as "they" do not have any form of control, and accordingly, they do not count on anyone for their work. The humanitarian organization OXFAM INTERNATIONAL (OI) made a report on the state of world trade and came to the conclusion that we, living in underdeveloped countries, are visible every day. Experts from this study have come to the conclusion that every 100USD of world product exports worldwide 97% go to developed and medium-sized countries, and only 3% arrive in poor countries. Thus, the World Trade Organization serves rich countries to further increase their no small fortunes. Of the 4 billion inhabitants of the underdeveloped countries, 1.3 billion do not have more than 1USD a day. Unfortunately, among them is the majority of our citizens. What is particularly worrying, according to the OI report, is the knowledge that poor countries are under a lot of pressure that the World Trade Organization, the IMF and the World Bank, immediately open their markets, liberalize prices and perform quick privatization without taking into account the the social consequences of such a blackmailing neo-liberal policy. When large capital has an interest in trade being free and when no one can compete in the market, then everyone has to respect the imposed rules of the game. If, however, this game does not bring profit to developed countries and their rich people, then protectionism is introduced. All international institutions are in the service of transnational companies that carry out globalization whenever they are fit for it. In addition, poor countries are asked to suspend subsidies to their peasants, while at the same time, according to the OI report, rich countries provide \$ 1 billion a day to their peasants.

The report states that EU and US members export their products at prices by one third lower than real production costs. How to survive in such a world?

### *3.5.1. Trade at the expense of the environment*

Free trade, which has no obstacles, leads to an increasing burden on the environment. The consequences are as follows:

#### 1. Increasing traffic

Global trade leads to a significant increase in traffic. Products are produced on individual production operations in different locations around the world. Parts of finished products are transported to as many markets as possible worldwide. Without a sustainable transport policy, free trade is associated with alarming direct and indirect environmental damage. Uncontrolled free trade leads to excessive exploitation of the sea, traffic congestion and forest destruction.

#### 2. Not taking into account production processes

Without consumer and production policy, free trade promotes many unneeded and cheap products. This requires the so-called same product treatment: organic products should not be better treated than environmentally harmful products. For example, WTO wood is a tree, regardless of whether it comes from legal or illegal sources.

#### 3. Marking ban

Product labeling can be labeled as a trade disruption. Free trade rules reduce the ability of new products to promote themselves through labeling.

#### 4. Ignoring basic ecological principles

Trade agreements do not respect the ecological principles that in Rio since 1992. form the basis of environmental policy. The Rio principles include: the precautionary principle, liability and compensation for adverse environmental impacts and internationalization of environmental costs.

#### 5. Survival of environmentally harmful subsidies

Although subsidies are contrary to free trade, international trading rules are not sufficiently consecutive for environmentally harmful subsidies, e.g. in agriculture or fishing.

#### 6. Enabling biopirateria

Trading rules require WTO members to introduce a patent system that would allow patents from other countries to use plants, animals, people and their genes. The WTO rules set the stage for biopirateria because of the lack of international rules regarding the access and division of genetic resources.

#### 7. Lack of environmental impact assessment

In the multilateral WTO agreements, regional free trade agreements and bilateral agreements between the two countries, no assessment is made of their environmental impacts.

#### 8. Commercial law is counter to environmental law

Commercial law is an independent legal regime that is incompatible with an international environmental agreement. Because the WTO can obtain its commercial right through controversial processes, the trade regime dominates over international environmental law, human rights and other social rights. Organic organizations consider WTO as an opponent of environmental policy for three reasons: most of them decide from economic point of view, not ecological, environmental principles are not respected, no distinction is made between ecological and conventional products.

### *3.5.2. Social and ecological world trade*

The way the WTO is currently operating serves only to boost free trade. This leads to an escalation of environmental and social problems. Promises that say more trade leads to more

growth and prosperity for all, turned out to be wrong. Greenpeace requires a social and environmental world trade regulation. The important thing is that: Global trade rules should be under the control of the UN. This would be the first step towards fair solutions to disputes between environmental protection, human rights, labor law and trade rules. Not only can economic interests be determined by rules. The trade regime, which seriously understands the development requirements must at the same time aim to promote environmental protection, social security and the well-being of people. Industrial countries should take the first step towards a new world trade system. They must open their markets for developing countries' products, abolish export subsidies and financially, and with the transfer of knowledge, support developing countries in their transition to an environmentally-friendly way of production. Industrial countries must show responsibility for goods that are prohibited at home and exported to developing countries at the same time. Only when these conditions are fulfilled can environmental protection be achieved and the development goals each country aspires to achieve.

#### 4. CONSLUSION

The multilateral trading system institutionalized by the establishment of the World Trade Organization is not a perfect and complicated system. Starting from the first day of entry into force of the World Trade Organization, there was a need for further upgrading of an institutionalized multilateral trading system. In the practice of its functioning, the World Trade Organization has not shown sufficient efficiency, responsibility and legitimacy in managing the global economy, has not yet become an operationalized system. It is therefore necessary to define more precisely the functions of the World Trade Organization, the way in which the undertaken obligations, the negotiating mechanism, the decision-making process, the decision-making process...The global trade organization accuses itself of being a gateway to the world government, unrepresentative and illegitimate, The World Trade Organization is increasingly affecting people's lives without being chosen by anyone. Membership in the World Trade Organization can also have significant negative consequences for certain protected sectors of a particular national economy, so the balance of benefits from membership in the World Trade Organization can be negative. As a conclusion, a serious analysis of each candidate country is required, which must provide answers and examine all the effects of membership in this organization and decide whether it is in its national interest.

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# METHODOLOGY FOR DETERMINING THE EFFECT OF ADULTERY TOURISM (DAILY REST) ON THE TOTAL INCOME FROM TOURIST OVERNIGHT STAYS

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## **ABSTRACT**

*Adultery tourism may be defined as a special interest tourism. Special interest tourism is often regarded as synonymous with ethical travel, social tourism, secondary tourism, ecotourism, alternative, educational, appropriate, environmental and sustainable tourism. This paper expands these synonyms with new category-adultery tourism. The growing sophistication of society, resulting in part from demographic and economic changes in society, has contributed to the blossoming of adultery tourism as a component of special interest tourism. This paper aims to present the impact of daily rest (adultery tourism) on total overnight income in tourist facilities that are in the area of one million people. The paper develops a methodology for determining the parameters, consisting of the radial distance from the big city, the number of rooms and type of facility, the total income from the overnight and the correlation to the daily rest income. The empirical part of the research was conducted on a focus group interview using a personal interview method on a sample of subjects that are active in the field of tourism. The survey will cover all facilities that provide daily rest and are advertised as a service in their offer in the mentioned macro-region.*

**Keywords:** *overnight income, special interest tourism, adultery tourism*

## **1. INTRODUCTON**

Any preliminary academic tourism text presents a number of theories of what tourism is and what are the main characteristics and basic elements of different types of tourism. 'Tourism' has been variously defined (Hunziker, 1942, Krapf, 1942., AISEST 1954. Cohen, 1974) and described in terms of traveller, businesses servicing traveller places (communities) in which the traveller goes to and through. Most (if not all) theories are developed by observing what is happening in the community and then transferring those observations into a model or written description. Most of the models consider the structure of tourism as an industry and an experience. Many of theories that underpin tourism theory were developed by practitioners and many of them continue to operate in a commercial world. The way that theories are developed is to research process, describe it and then test it for accuracy. We have referred to the adultery tourism that explains how to do something – the models that we used to illustrate that theory. They describe things as they are. A more general and workable definition was found with Murphy and Murphy (2004.) "Regardless of the definitions and theoretical approach is taken,

few deny the need to concentrate more on the development of theory in the area of community tourism” (Murphy and Murphy 2004, p 30). The tourism we are interested in here, in term of their use belongs in a wider term of community tourism. This paper examines various indicators and research appearance that is recognised in the commercial world of tourism as adultery tourism. Secondary, the paper will explore:

- relationship between income of daily rest vs. income from overnight stays;
- correlation between radial distance from big city and income of daily rest;
- type and size of the facility.

## **2. CAN WE DESCRIBE ADULTERY TOURISM AS A PART OF SPECIAL INTEREST TOURISM**

One of the major characteristics of tourism is its dynamic nature. This dynamism is reinforced by socio-economic situations that have led to substantial changes in travel and leisure demand. As expressed by the World Tourism Organization (1995.), tourism is ambivalent. It can contribute positively or negatively to the local community. New forms of tourism bring new challenges and more demanding standards, in the opposite of mass tourism which is related to two main characteristics: participation of a huge number of people and holiday is more or less standardized, packaged and inflexible; special interest tourism is to encompass diverse kinds of market segments. Tourism product can also be as varied as the market segments. Special interest tourism is often regarded as synonymous with ethical travel, social tourism, secondary tourism, ecotourism, alternative, educational, appropriate, environmental and sustainable tourism. S.E. Read attempted definition of special interest tourism: “special interest travel is travel for people who are going somewhere because they have a particular interest that can be pursued in a particular region or a particular destination.” (Read 1980.). Douglas describes special interest tourism as the “The provision of customised leisure and recreational experiences are driven by the specific interests of individuals and groups” (Douglas et al., 2001, p. 3). It is evident from the description given in that special interest tourism and it is loaded with a number of alternative forms. Each form qualifies to be as valid as a feature of special interest tourism as the other forms. Thus purpose as an important ingredient, in addition to leisure, forms the core of special interest tourism. The tourist with special interest decides to fulfil one or more useful objective/s during his/her travel. These objectives appear to have a purpose. Evidently, an enriching experience in addition to leisure and non-routine activities is an essential condition for adultery tourism. We may, therefore, accept adultery tourism as the form of special interest tourism which offers some “meaning” to the tourist at the destinations along with a sense of pleasure away from the routine activities. The adultery tourism as a part of special interest tourism encompasses diverse kinds of market segments and the tourism product can also be varied as the market segment. Obviously, then designing and developing adultery tourism as a part of special interest tourism, a tourism product that requires an attentive selection to be made. In this process of selection, various types of accommodation begin to play significant roles. It is different if it is the accommodation in a rural area; like a small agriculture farm, spa resort or apartment for rent. For example, one may travel to the facility only to stay during the day (afternoon) and that is a very specific interest, while another may travel to have a complete experience of one or two day stay as for example in a spa resort. It is evident from the description given in the preceding that adultery tourism is loaded with a number of alternative forms. On the face of it, therefore, adultery tourism appears to be the type of tourism that can offer multiple opportunities. Foremost in this context the question is the type and size of facility. It is common knowledge in tourism that all facilities have their own limitations in terms of offering possibility for adultery tourism - physical limitations and limitations relating to ambience. Therefore, adultery tourism as a tourism product cannot claim the exclusivity of facility.

This kind of exclusivity would mean introduction of very specialised determinants at the facility. This would lead to serious problem if the facility will be recognized only as a part of adultery tourism. Under such circumstances, it is advisable to look for commonalities in adultery tourism that relate not only for advertising as a daily rest facility.

### **2.1. Accessibility: A key factor for adultery tourism**

Since adultery tourism caters to special interests, in most of cases, tourist facilities are found situated in areas which may not come under the main network. Accessibility of the objects, direct entering without being patronized from receptionists, possibility of direct entering from garage therefore, it becomes a key factor in designing adultery tourism products. This imposes a certain restriction in terms of selection of facility and also keeps out a few quality facilities out of the purview of consideration. A conveniently accessible facility would also enjoy a certain edge over those facilities which may be good in terms of quality of their product but may not have the benefit of easy accessibility.

### **2.2. Application of the motivation theories into adultery tourism**

The basic motivation for adultery is based on three motivation theories which are also fully dominated in tourism theory. The authors examine what the main motivation in choosing adultery tourism is. The primary drivers for adultery tourism are needs to escape from daily routine, workplace, but also social needs such as meeting other people, experiencing something unusual. Motivation as an internal drive that guides people's behaviour and decision making has been examined in relation to work, sport, travel and other leisure time activities as adultery. Motivational research usually includes Maslow's hierarchy of needs (1954.). Maslow's hierarchy of needs suggests that people are motivated to fulfil basic needs before moving on to other (physiological needs; safety needs; social needs; cognitive and aesthetic needs, and self actualization needs or self realization needs). Self realization needs are on the top of the Maslow's hierarchy. S.E.Iso-Ahola's motivation model are based on a two-dimensional leisure motivation theory: escaping (everyday environments, routine, everyday problems, familiar environments, tension, stress and appeal of the new situation), seeking (seeking some rewards). According to S.E. Iso-Ahola both these elements have personal and interpersonal components. (Iso-Ahola, 1982). The push-pull theory is another approach that often complements Iso Ahola's model (Crompton, 1979). Crompton and McKay (1997) present: push factors (internal motives) as escaping motives and pull factors (external stimulus) as seeking motives. For adultery tourist classification can be also used in Plog's psychographic motivation theory. This theory classifies tourists along with their personal characteristics, lifestyle and personal values, to psychocentrics that are one extreme to the allocentric at the other. Psychocentrics are represented by people concerned of their own affairs, i.e. no adventurous visitors, who often require standard services, while allocentric are independent tourists seeking adventure or experience. (Plog, 1974).

## **3. DEVELOPMENT HYPOTHESIS**

The objective of the current study is to investigate the potential impacts of the daily rest (adultery tourism) on total overnight income in tourist facilities that are in the area of one million people. According to 24 representatives who were included in focus groups, we created a working hypothesis. According to information (data) brought by the focus group, we came up to the following hypothesis:

- H0 daily rest makes a significant income in tourist objects to 5 rooms
- H1 daily rest does not depend on whether the facility has or has not a wellness
- H2 location of the facility presents the competitive advantage in forming the price
- H3 restaurant service is an irrelevant component in daily rest
- H4 room service presents a competitive advantage in daily rest

#### **4. REASRCH METODOLOGY**

The research methodology is divided into two parts. First, the part is made out of personalized interviews with stakeholders (owners or employees) –focus group. The sample population of the survey consists of 24 participants –focus group. There were three groups of 8 stakeholders/owners /employees for three different categories of accommodation (hotel -spa, rural accommodation, apartments). There are insights into how stakeholders think and provide phenomena which are here being studied. Field research with owners was carried out from February to March 2019 in the counties of Zagrebacka, Krapinsko-zagorska, and town of Zagreb. A questionnaire was used of 23 opened questions. In these development stages, we brainstorm in order to develop a list of questions and then prioritize which questions are of most importance for our survey. Their answers also were very important in creating a working hypothesis. After that, we have created a questionnaire. The first part of the questionnaire is consisted out of questions: type of objects and additional offers. The second part of the questionnaire is consisted of evaluating and rating questions.

*Table following on the next page*

Table 1: Questionnaire (Survey)

(The survey is anonymous and will be strictly used for scientific work)

TOURISM FACILITY- ANY BUSINESS SUBJECT TO PROVIDE ACCOMMODATION BY THE CLASSIFICATION AND DEVELOPMENT RULES	
SMALL TOWN - ANY TOWN UP TO 20 000 INHABITANTS	
Please indicate your core business (area of activities)	<b>1. Hotel</b> <b>2. Hotel heritage</b> <b>3. Apartment hotel,</b> <b>4. Tourist settlement,</b> <b>5. Tourist apartment,</b> <b>6. Boarding house (pansione),</b> 7. Spa accommodation 8. Agriotourism in rural area (room, apartment, studio apartment, holiday house) or similar
How many rooms has your tourist facility got	a) less than 5 b) from 5 to 10 c) from 11 to 20 d) from 21 to 50 e) more than 50
How much is the average size of the room / apartment:	a) less than 10m <sup>2</sup> b) from 10 to 15 m <sup>2</sup> c) from 16 to 20 m <sup>2</sup> d) from 21 to 50 m <sup>2</sup> e) more than 50 m <sup>2</sup>
Does the tourist facility has a restaurant:	a) no b) yes c) yes, with room service
Do the daily rest consumers use restaurant service (not room service):	a) no restaurant b) very rarely c) often d) never
Do the daily rest consumers use room service:	a) no restaurant b) very rarely c) often d) never
Do the daily rest consumers use wellness:	a) the tourist facility does not have that service b) use it in pairs c) they use it alone, individually
How long have you been employed in a tourist facility that offers accommodation service:	a) less than two years a) from 2 to 5 years b) from 6 to 8 years c) from 9 to 10 years d) more than years
How long does a tourist facility which you work in exists:	a) less than 2 years b) from 2 to 5 years c) from 6 to 8 years d) from 9 to 10 years e) more than 10 years
How long does a tourist facility which you are employed in has an offer for a daily rest:	a) less than 2 years b) from 2 to 5 years c) from 6 to 8 years d) from 9 to 10 years e) more than 10 years
Where is your tourist facility located	a) near a larger town (up to 5 km) - outside b) at the edge of a larger town (in a town but not in the narrow center) c) in the arrow center of a larger town d) in a small town (more than 5 km from a larger town)
What is the price of the daily rest:	a) less than 100 kn b) from 100 to 200 kn c) from 200 to 300 kn d) from 300 to 500 kn e) more than 500 kn
What is the price of the daily rest in relation to the price of overnight stays:	a) less than 30 % b) from 30 to 50 % c) from 50 to 75 % d) from 75 to 100 % e) more than 100 %
What is the income from daily rest in relation to total overnight stay income:	a) less than 10 % b) from 10 to 20 % c) from 20 to 30 % d) from 30 to 50 % e) more than 50 %

In the following questions, evaluate from 1 to 5 following statements (round out your answer: 1 very incorrect - 5 very correct). You do not evaluate the claim, but the quality of the claim (for example, in the 2nd question you do not judge if the use of the daily rest SHOULD BE in pairs, but whether IS IT in pairs)

*Table 2: The second part of the questionnaire (consisted of evaluating and rating questions)*

1. Daily rest is more practiced over the weekend than during the working days				
1	2	3	4	5

2. Daily rest is more practiced in pairs than singles				
1	2	3	4	5

3. If practiced in pairs, then these are more heterosexual couples				
1	2	3	4	5

4. If practiced in a pair (heterosexual), then the reservations are more often done by a male				
1	2	3	4	5

5. Consumers of daily rest are frequent users (using it several times)				
1	2	3	4	5

6. There is a possibility of private entry into the accommodation unit (use of parking without registration at the reception)				
1	2	3	4	5

7. There is a possibility of private use of the room in the accommodation unit (payment out of visiting the reception)				
1	2	3	4	5

8. There is a possibility of payment of daily rest by paying another service (drinks, holding a seminar or similar)				
1	2	3	4	5

## 5. CONCLUSION AND FUTURE RECOMMENDATIONS

There are a plethora of different definitions of what is tourism. Some of them are archaic and very old and they do not say us anything about the new forms of tourism and influence of the income from the daily rest on the total income from tourist overnight stays. The share of income regarding adultery tourism in total overnight stay income has not yet been researched neither statistically presented as an equal income. Adultery tourism exists. Its name also becomes from business practice, not for signification or academic works. This is a pioneer attempt to development methodology, creating a survey, and investigate the correlation between income from daily rest and total income from overnight. We do not find any relevant research and signification paper which investigate methodology, type of facilities, and connection between room service, wellness and adultery tourism. Based on the conducted analysis and presented arguments from a focus group we unambiguously demonstrated the extreme influence of daily rest in income in smaller objects up to 5 rooms. Furthermore, daily rest is more practiced over working days than during the weekend, and it is more practiced by couples. Also, the reservations are more often done by a male. This preliminary paper (work) proves that there is a significant difference between the size of the facility and the income from daily rest versus

the total income of overnight stay. For further providing of hypothesis, authors will conduct research based on a sample of all tourist facilities that are advertising daily rest in the earlier mentioned region.

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## ECOLOGICAL MANAGEMENT SYSTEM AS A COMPONENT OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT

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### ABSTRACT

*The eco-management system represents a complex system of business improvement, as well as various elements (organizational structure, procedures...) that ensure the maintenance, implementation and development of ecological management of an enterprise. The principle of environmental management establishes a different attitude towards the environment. This relationship is reflected in the continuous struggle for the preservation of the environment, primarily by gradual reduction of pollution based on a longer time basis. Implementation of the eco-management system can refer to the whole company, one branch or one work process, and the choice is mainly dependent on the company's needs. This work starts from defining the basic concepts of sustainable development, ecology, and environmental management, and the realization of their purpose and significance for the development of one company. We are going to plan, introduce, measure and evaluate the eco-management system, where we will describe the re-examination and improvement of the system itself. In this paper, special attention will be paid to the product itself as a component of the ecological system. Quality and eco-quality of products are important features of each product, and they represent the ability of the product to satisfy the needs of consumers. Because of the ever-present environmental problems, one should pay attention to the extent to which the quality of a product will affect the pollution of the environment. Through the life cycle of a product, company management can assess the benefits, but also eliminate adverse effects on the product itself, by changing only a certain phase of the product life cycle. In the middle part of the work, the economic subsystem will be presented as a component of the concept of sustainable development. By measuring the sustainability of development, we will try to answer one question: To what extent the use of natural resources and the environment is possible if our economy needs to exist for a long time? This question can serve as a basis for formulating a sustainable economy model. Through the case studies of some environmental and economic problems will be determined the success or failure of the market in solving the given problems. This paper deals with a topic that has been explored earlier, and whose research is still very current, precisely because of the potential benefits of introducing an environmental management system to the sustainable development of one company. The introduction of an environmental management system leads to the harmonization of economic interests and interests for environmental protection.*

**Keywords:** *eco-management system, concept of sustainable development, ecology, environment, product*

### 1. INTRODUCTION

The man has always treated the natural environment with respect, especially when it comes to extracting sources, water, soil and air. Economically speaking, there are numerous problems that manifest themselves as endangering the environment due to increasing economic growth. This means the exhaustion of sources of energy and raw materials and increasingly uncertain and expensive future production, pollution of water, food and air, which means higher

expenditures on health, shortening of life expectancy, which at the same time represents a decrease in working ability and basic conditions for quality of life, environmental conditions and human populations. If we attach more importance to the ongoing struggle for the preservation of a healthy environment, insofar as we are more likely to influence the building of a desirable image of an organization, and therefore the sustainable development of the whole community. In order to survive the human species, it is necessary as soon as possible to achieve sustainable development. Young people play a key role in achieving sustainable development, since no one is more interested in achieving sustainable development than those who will benefit him most. Young people should have inspiration for further discovery of natural beauties in their environment, to contribute to a better understanding of the natural environment and the need for its protection... What scientists would say: "THINK GLOBAL, ACT LOCAL".

## **2. THE IMPORTANCE OF ECOLOGICAL MANAGEMENT**

*Man, nature can do without you! And you without her?*  
*Albert Einstein*

The word "management" means management, leadership,...and as it comes to the environment, this type of management would mean environmental management of various forms of pollution. The subject of ecological management is to comprehensively study all the consequences of the anthropogenic impact of economic and technological development on ecosystems. The goal of environmental management is to change the existing state of pollution and environmental degradation, using ecological engineering methods and legal-economic instruments. Ecological management is a management whose activities have an impact on environmental protection and can also be defined as a control of all human activities that can have an impact on the environment and its quality. The principle of environmental management implies the establishment of a different attitude towards the environment, which is reflected in the continuous struggle for the preservation of a healthy environment. Today, in most countries, eco-management is still voluntary, but more and more companies find that eco-management implements their business and creates a positive image. Eco-management becomes a kind of business philosophy and equally takes its place in relation to other sectors in the company<sup>1</sup>. Ecological management slowly but surely becomes a profession and a very significant factor in business. Business systems in eco-management see their better position in the market<sup>2</sup>.

### **2.1. Ecological management system**

Ecological Management System (EMS) is a complex system of elements (organizational structure, procedures ...) that ensure the maintenance, implementation and development of ecological management of an enterprise. The introduction of eco-management system leads to harmonization of economic interests and interests for environmental protection. The potential benefits from the introduction of this method of management are: reduction of pollution, gaining customer confidence, the possibility of easier access to capital, improving the overall image of businesses, easier obtaining of various permits. The environmental management system includes the following elements:

- Obligations and policies,
- Planning,
- Introducing,
- Measurement and evaluation,

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<sup>1</sup> Jovanovic, L., Ecological Management, Faculty of Management, Belgrade, 2002.

<sup>2</sup> Vojnovic, Z. : Ecological management, VPS Cacak, 2007.

- Reconsideration and improvement.

#### *2.1.1. Obligations and policy of the ecological management system*

In order for the company to enter into the introduction of an environmental management system, it first has to harmonize its business with regulations and define its responsibilities. The introduction of the EMS begins with a review of the current state of the environment, which determines what aspects of the environment are endangered by the operations of a particular company, determines the functions and activities that can lead to improvement or deterioration of environmental protection. After this step, the determination of the environmental policy is followed, which determines the goal, as well as the main values and attitudes of the organization regarding the protection. Ecological policy must be in coordination with other policies, e.g. product quality policy, employee safety, etc.

#### *2.1.2. Planning the eco-management system*

First, the identification of environmental aspects and impacts on the environment should be carried out. They are the cause and effect relationships. After the company should align its plan with the laws and regulations which the company is subject. Then determine the general and specific objectives of environmental protection. General goals (the reduction of inputs, by-products, environmental awareness) are very broad. Finally, an environmental management program is established.

#### *2.1.3. Introduction of eco-management system*

In order to be able to introduce an EMS system, the company must provide the necessary resources for it. Besides, the company must define the obligations and responsibilities of all employees. It is clear that the greatest responsibility lies at the very top of the organization. In addition, it is necessary for all employees to have the appropriate knowledge and skills. The introduction of EMS also implies the establishment of a response plan in case of some dangers.

#### *2.1.4. Measurement and evaluation of eco-management systems*

This refers to measuring, monitoring and evaluating the effects of protection. The data obtained must be reliable, relevant, objective, and monitoring must be continuous.

#### *2.1.5. Reconsidering and improving the ecological management system*

It is necessary to review this system at certain intervals. The scope of the review must be wide enough to cover all dimensions of protection related to all products and services. The company should strive for continuous improvement of the environmental management system.

### **3. PRODUCT AS A COMPONENT OF THE ECOLOGICAL SYSTEM**

The product is the result of the production process of a company that serves to satisfy human needs. There is a lot of definition of the product, but in each of them it is emphasized that the essence of the product is a requirement that satisfies its use. Most companies do not offer just one product. A set of all products that make up the offer of an enterprise is called a product range. Each product has certain features, such as quality and functionality, design, style and fashion, packaging, etc. The quality of products is the product's ability to satisfy the needs of consumers. The quality of products is covered by the International Standard ISO 9000, which establishes a system of international recognition of the quality of products and services.

#### **3.1. Eco product quality**

Analyzing the current quality system of products, ISO 9000, it can be noticed that these standards do not include the environmental problem. Due to the ever-present environmental

problems, it was realized that the quality of products can not be viewed as a similarity to the user that ensures the satisfaction of their needs, and to not strive for satisfying those needs at any cost (ie, cost of environmental pollution). This led to the introduction of ecological systems in the production system, and thus the introduction of eco-product quality. So the definition of product quality changes: The overall quality of products is the result of its technical, economic and environmental characteristics in the production, use and treatment. The introduction of an environmental component is reflected on the company by significantly increasing sales, profit, stock value ...

#### **4. PRODUCT LIFECYCLE**

There are three approaches to product life cycle: classical, semicircular and closed (circular). Product life cycle refers to the monitoring of the product from its formation to its elimination from the production program. The lifetime of a product depends on the mode of production, its very nature, the needs it satisfies and the like. Classical approach (linear) means that the product is monitored and has the following phases: 1. extraction of raw materials (primary), 2. production of materials, 3. processing of materials into products, 4. use of products, 5. end of use of the product (formation of waste) . Business that is not based on ecological grounds is not sustainable over the long term, as it leads to the accumulation of waste. The semicircular approach is functioned by insisting on the side of the input on secondary raw materials, and on the side of the exit on recycling, and returning waste into the production process. This system can survive longer than conventional, as long as primary raw materials from limited reserves are used, its survival is limited. Closed access is the only long-term sustainable system. This system refers to the fact that you do not use primary resources, but only secondary, but it is so different name circular. It is based on the fact that after the use phase, all waste is processed and returned to the production process.

##### **4.1. Product life cycle assessment**

LCA Life Cycle Assessment involves data collection and assessment of all inputs, outputs and potential environmental impacts. LCA studies can not measure the actual impact but only the potential. LCA is used to assess where and how different parts of the life cycle of the product contribute to various possible effects, such as global warming, ozone depletion, water and air pollution, and the like. This knowledge is very important for company management because it allows it to eliminate adverse effects by changing only a certain phase of the life cycle of the product. The reason for introducing the LCA methodology is that by changing technology it is possible to produce more products using less resources, thereby reducing the environmental footprint, i.e. environmental burden, and enable sustainable development. The LCA methodology has the following stages:

- Define the object and purpose of the research
- Inventory analysis
- Evaluation of Environmental Impact
- The interpretation of the results.

In the first phase, i.e. defining the object and purpose of the research is the purpose of the research, the subject, the methodology to be used and the procedure for data collection. The second phase, i.e. The inventory analysis involves the collection of data on all inputs from the environment, and all outputs that are deposited in the environment. This can be done by: direct measurement on the site itself, by examining employees, data from the database, and the like. The third phase of LCA is an impact assessment. The aim of this phase is to determine the intensity of the overall environmental impact, and it is done in three steps:

1. Classification (where different classes are formed-types of influences)

2. Characterization (impact assessment reduced to quantity, i.e. unit measures) and
3. General evaluation (comparison of the obtained results).

The fourth phase is the interpretation phase of the obtained results, and besides the presentation of the results, it includes a critical review of the performance of the study, i.e. evaluation of the study.

## 5. SUSTAINABLE DEVELOPMENT

The word "development" is used in various situations and to explain various changes and phenomena - "plant development", "fetal development", "development of the nervous system", as well as "industry development", "urban development", "development of traffic", "development of science", "development of the internet" or "development of sports". We also met with the description of some concrete development, which can be fast, visible, successful, large, as much as slow, unpredictable, uncontrollable... The concept of sustainable development is, most often, related to the protection of the environment, planning social development, environmental, economic and political issues<sup>3</sup>. Sustainable development is a development that meets the needs of the present generations, without compromising the ability of future generations to meet their needs. Sustainable development is a harmonious relationship between ecology and economy in order to preserve the natural wealth of our planet for future generations. It is a tendency to create a better world. Can other living beings follow the pace of human development and the speed of changes that are created under the influence of human activity? What if one forgets that everything in nature is connected and do not pay attention to other living beings can not be so quick to adjust to the change? If it does not pay attention to factors of non-living nature that also change? If you are concerned only with your development, forget that resources are non-renewable? If you do not notice that some things from nature are slowly disappearing? Man will meet his needs today - industry development, urban development, traffic development and many other things and phenomena that are able to change, will enable him to live easier and more beautiful. But what kind of nature and conditions for life are left to their descendants? Will they be able to survive on such a planet? Man in many ways threatens the nature from which his own survival depends. Scientists from around the world are going to meet, reflect and agree what to do! The most important conclusion was: the behavior of people in all areas of life must change! In order to preserve the natural wealth of the planet and living conditions that preserve life for future generations, the mutual relations must be harmonized and jointly planned economic development, environmental protection and the development of society. Both young people and children are important factors for sustainable development. Therefore, the awareness and behavior of young people in the spirit of sustainable development, environmental protection, as well as the preservation of the natural heritage should be developed<sup>4</sup>.

## 6. ECONOMIC SUBSYSTEM AS A COMPONENT OF CONCEPT OF SUSTAINABLE DEVELOPMENT

Although the concept of sustainable development has evolved from scientific literature in which sustainability is interpreted as the management of natural resources in a way that preserves their reproductive capacity. The definition given by the Brundtland Commission allows for a wider interpretation of this term, which affects the economic and social sphere. Thus, under sustainable development, broader terms mean development that is economically and socially, and not only environmentally sustainable.

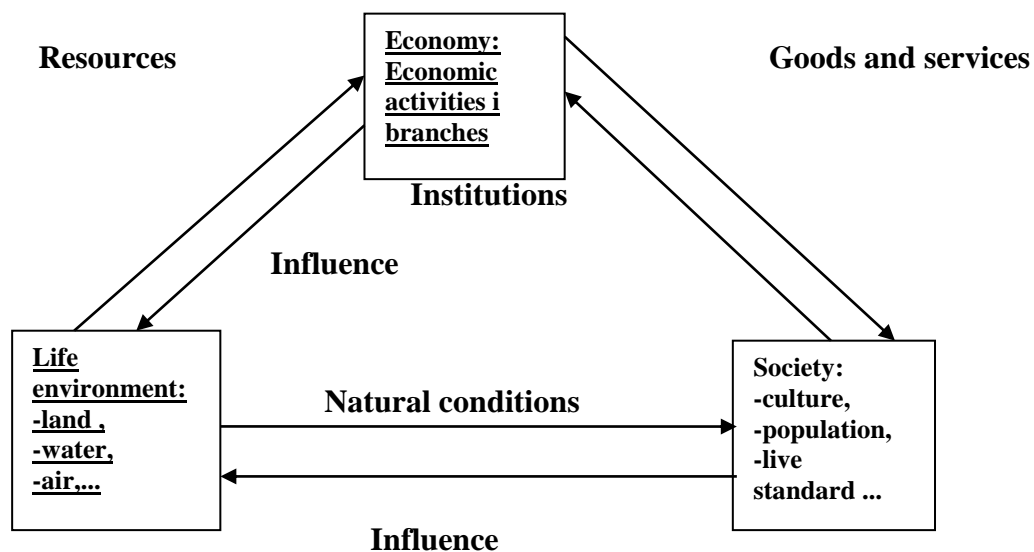
<sup>3</sup> Markovic, M. "Culture-Towards Sustainable Development", Economic Views, Vol. 15, No. 2, Kos. Mitrovica, 2013. p.137

<sup>4</sup> Association "Environmental Protection Engineers", "Water-Sources of Sustainable Development", Novi Sad, 2011, p. 10.

The complexity of sustainable development points to balancing, equality and homogeneous unification of objectives that can be classified as follows:

1. Economic objectives (production growth, closing the gap between the rich and the poor),
2. Environmental objectives (environmental quality, climate change, waste, etc.),
3. Social goals (education, standard of living, health and social insurance),
4. Spatial objectives (balance of urban-rural configurations and territorial economic activities),
5. Cultural goals (conceptualization of eco-development norms with respect to local, economic, cultural and social specifics).

Subliming cultural and spatial goals in a wider social subsystem, a simplified view of sustainable development would have only three subsystems: economic, environmental and social, interacting interactively.



*Figure 1: Interaction between the economic, ecological and social subsystem  
According to: Jovanovic, L., Ecological Management, Faculty of Management, Belgrade,  
2002*

Excessive emphasis on the ecological subsystem would lead to the opposite, so-called economicism. Insisting on the attitude, which gives dominant importance to ecological requirements, can lead to economic problems. Economic and other activities must be aimed at closing the poverty line and reducing environmental damage through:

1. assessment of the environmental impact, with the aim of preventing further degradation,
2. defining the environmental protection system, with reference to the legal regulations and their application,
3. the development of new so-called clean technologies whose main characteristic is to reduce emissions of harmful externalities,
4. Fundamental and applied development of new products, with a longer lifetime and recyclability,
5. institution development.

Ecological growth and development can not be unlimited, because the economy can not function independently of the ecological capacity of the environment. There is usually an agreement between the quality of the natural environment and the economic development of the country.

An economic system that does not evaluate natural resources in an adequate way and which stimulates unlimited economic growth despite limited resources is long-term unsustainable. Therefore, the whole economy should behave like a mature ecological system characterized by more intensive investment in bioproduction and increasing quality of life, because natural resources are not able to reproduce independently. Economic development is only part of the development of a country, as it became obvious that more intensive economic growth is impossible without environmental protection and faithful reproduction of the environment. For assessing the level of development of a country, the traditional indicator of economic development is mainly used: gross and net national income or product, national income, per capita income, etc. Irrespective of whether they are aggregate or per capita, they are good indicators of social well-being and economic health, as they do not reflect ecologically harmful activity of the economic activity and do not report on profound changes in the structure of the community itself. Economic indicators have a higher value. The more intense environmental degradation of the environment implies an increased need for environmental protection systems whose production increases the national welfare of the country as a gross / net national product is taken as an indicator of development. The economic indicator of the development of the country can grow, and the living conditions are worse and the earth is causing ecological bankruptcy. Gross domestic product (GDP) is insufficiently transparent or even the wrong indicator of "real income" and should be corrected. GDP growth shows the pace of development, but at the same time it does not show the direction of action-whether it leads to an increase in the quality of life or leads to an ecological disaster.

## **7. LIMITING FACTORS OF SUSTAINABLE DEVELOPMENT IN THE REPUBLIC OF SERBIA**

The energy crisis of the mid-1970s, accompanied by a general raw material crisis, has shown that the world economy has serious development barriers to its expansion. Thanks to high technology, these barriers are diminished. Social development in the 20th century is interpreted on the basis of the concept of preserving various types of capital for present and future generations. Since the beginning of the transition, Serbian economy has grown at a relatively high rate. From 2000 to 2008, the average GDP rate was 5.4%, making Serbia one of the leading countries in Central and Eastern Europe. Unfortunately, this growth was unbalanced. New time is looking for a new approach to economic growth that will be based on real sources of savings and competitiveness, above all. Those who do not respect it will not be able to count on success in the global economy. The goal of the Sustainable Development Strategy of the RS is to balance three key factors: sustainable economic growth and economic and technological development, sustainable development of the society based on social balance, environmental protection with the rational disposal of natural resources. The unsatisfactory results of the past years have been due to a democratic deficit, an administrative deficit, a pathetic and economic deficit<sup>5</sup>. Serbia needs to complete the process of democratization, to train a sufficiently high quality cadre to plan, implement and control the implementation of this strategy, to strengthen the will of political entities, states and parties in the country, and to address the problems of economic transition through which state still passes. The main limiting factor for further economic development of Serbia is a high deficit of the balance of payments and high foreign debt, as a result of inadequate production structure and exports generated by such an economic structure. This is primarily because of the war in the surrounding, sanctions, bombings that have strangled us from foreign markets and prevented companies from modernizing themselves. With the appearance of financial crises in various parts of the world in the 1990s, the concept of a sustainable current account deficit is beginning to be used.

<sup>5</sup> Nadic, D., Suvakovic, U., National Strategy for Sustainable Development of the Republic of Serbia - Political Vision and Utopia, p.165-16, Ecologica br.62, Belgrade, 2011.

This implies a deficit that does not lead to drastic changes in economic policy or to a balance of payments crisis<sup>6</sup>. The current account deficit is the result of a high investment in relation to domestic savings, that is, it is the best indicator of how much a country spends more in relation to its own production. The current balance sheet consists of the balance of foreign trade, ie the export of goods and services, the balance of factor incomes (the difference between the income from investments paid by foreign actors and income from investments received by domestic business entities from abroad) and unlisted transfers. The current account deficit is usually financed by foreign direct investment, net loans from abroad and the private sector, or the reduction of foreign exchange reserves of the country. Reducing liquidity on the global financial market under the conditions of the financial crisis conditioned the reduction of capital inflows: loans, foreign investments and privatization proceeds. The World Bank considers critical deficits to be above 5% of GDP. By 2008, Serbia had a very high deficit of the current account of the balance of payments, almost 18%, and in 2010 it amounted to about 8.5%. Countries that did not feel a major blow to the crisis did not have the financial sector more integrated into the global market. Serbia also had negative effects due to the decline in foreign investment and the decline in demand in developed countries. The Balkan and Baltic countries had a rapid increase in GDP, but were followed by a high current account deficit. Among them is Serbia. The greater part of the period from 2000 to 2008 is characterized by a loose monetary policy and a stronger integration of financial markets in the world. Most of the funds that came into the country were in the form of loans or funds that went into privatization. The current account deficit of the balance of payments is more easily maintained in developed countries than in countries in transition due to higher quality institutions, a deeper and more liquid financial market. The growing current account deficit, funded by capital inflows, mainly foreign loans, affects the growth of external debt. The external debt becomes problematic when it comes to a level of 60% of GDP. In the case of Serbia, it amounts to 75.6%. The external debt of the state reached 10.4 billion euros, and the total external debt with corporate loans is 24 billion. Most foreign direct investments in Serbia are Investments to secure the market. Investments in financial intermediation, trade, real estate, traffic, construction are market oriented and belong to the non-tradable goods sector. To be more successful in taking advantage of the free market within the free trade zone, Serbia has to improve its export offer. Although Serbia's economic growth in the last few years has been relatively high, it has been based on only three sectors (financial intermediation, wholesale and retail trade, and traffic and telecommunications), which are deserving of about three quarters of the total economic growth from 2002 to 2008. In order for Serbia to achieve sustainable development, ie to prevent further growth in unemployment, poverty, the average annual growth in industrial production should amount to 6.9% annually. This would allow annual export growth of 13.5% and increase its participation in GDP to 65%. With an annual growth of 5.8%, in 2020, the GDP per capita of 8000 euros would be. As today's increasingly difficult to borrow abroad, the main emphasis must be placed on SDI that represent assets that do not have to be returned. These monetary policy measures must be directed towards technologically intensive production branches. The inclusion in the development programs of powerful corporations is one way to start the economy of Serbia with macroeconomic restructuring towards the development of technologically intensive branches.

## 8. CONCLUSION

On today's level of economic development, scientific and technical development and the state of contamination in the world, all managers need to be ecologically educated. This also applies to managers of economists. Economic theory has not given the necessary importance to ecological problems. It was considered for the time being that the concern for nature and environment protection should be led by some ecological groups with romantic natural ecstasy,

<sup>6</sup> Golubovic, N., On the sustainability of the current account deficit of Serbia, p.271.

traditional lifestyle lovers, gorani and mountaineers, etc. However, ecology is increasingly becoming an integral part of global political management, it is understood as a global cosmopolitan problem, and ecological management is becoming more and more popular, and so on. Because of this, today's economists, as leading contemporary managers, understand environmental issues as an imperative of collective survival and the premise of business success. Investment in ecology can be profitable, as a strategic advantage and the basis of business success on the market. It represents a challenge in terms of job creation and incentives for eco-innovation and entrepreneurial change. These, and many other reasons, affect economists today to be "green." Sustainable development brings together the concern of the living world on the planet Earth to preserve the capacity of natural systems (natural resources), at the same time preserving the economic subsystem as a component of the concept of sustainable development. Social contribution precisely implies the development of a society that meets the needs of human resources with available resources, not endangering natural systems and the environment, thus ensuring the long-term existence of human society and its environment. The concept of sustainable development represents a new strategy and philosophy of social development. Setting the best measures for removing the negative factors of sustainable development is a very complex task. Modern living conditions, population growth, increasing use of limited resources and numerous environmental problems have confronted us with the issue of sustainable development and the need to act globally on the planet's preservation, in order to enable life for future generations. The potential objectives of introducing the environmental management system are: reducing pollution, acquiring customer confidence, the possibility of easier access to capital, improving the overall image of the company and the like, and thus preserving the ecological base necessary for human activities that must be preserved for the next generations. The social goal of this paper is to see if there is a strategic sustainable development pattern that will meet the needs of the present, without compromising the ability of future generations to meet their own needs and improve the quality of life.

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# THE CHANGING ROLE OF ERP AND CRM IN DIGITAL TRANSFORMATION

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## ABSTRACT

*In order to digitally transform the way of doing business, two scenarios are feasible: First, starting from scratch and building a new digital platform for digital enterprise regardless of legacy systems; second, building-up on existing information technology infrastructure. The appliance of one of these two scenarios depends on various factors, like organizational current level of digital maturity, scope of “going digital” endeavor, industry and other. The goal of our research is to examine more in detail the second scenario, when businesses have to lean a new digital platform onto existing information systems. For the purpose of gathering insights on experiences and issues related to linking Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems to digital enterprise platforms, existing relevant research publications have been explored. The objective of this paper is therefore twofold: (1) to investigate publications explaining issues regarding digital transformation (DT) and enterprise resource planning or customer relationship management, (2) to identify, based on research and practical experiences and insights, key impact options of digital transformation on these two types of existing systems and their changing role within organizations.*

**Keywords:** *customer relationship management, digital transformation, enterprise resource planning*

## 1. INTRODUCTION

In general, the awareness of management that digitalization is a necessity for a company to remain competitive is growing. It is important to clarify what the notion of digitalization implies, since sometimes this term is identified as simply more investing in information technology. Some authors (Legner et al., 2017) point out that due to technological innovations the look on information technology and information systems has changed recently, and they are now part of almost every product or service. Gartner defines digitalization as “the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business” (Gartner, 2018). That means, the use of digital technology should contribute to the company's performance. Riedl et al. (2017) emphasize that the challenge of digital transformation is dual, encompassing (a) the search for new solutions to improve business through changes in business processes, products and business models, and (b) the way digitalization process is managed. Fitzgerald et al. (2018) define digital transformation as “the use of new digital technologies (social media, mobile, analytics or embedded devices) to enable major business improvements (such as enhancing customer experience, streamlining operations or creating new business models)”. Their online research conducted on 1559 respondents from 102 countries has shown that companies have

the most success with the application of digital technology in the field of customer relations and automation of certain processes, but many of them do not have a clear perception of the benefits that digital technology brings. The respondents have identified a problem of defining key investment performance indicators as a significant problem of investing in digital transformation since, for example, return on investment (ROI) calculation is very complex in this type of investment. Literature illustrates how companies through digital transformation come to new sources of revenues and even to brand new business models. Hess et al. (2016) indicate that the integration of digital technology into company's products is among the key aspects of digital transformation. They study three German media companies that are successful in the implementation of digital transformation. The television broadcasting company P7S1 began with digital transformation in a situation of high profitability and targeted digitalization on television broadcasting as well as on diversification of business. That endeavor, for example, led to 19% of total revenues in 2013 being generated by digital products and services. The Mittelbayerische newspaper publisher has started digital transformation because of financial problems caused by the fall in the sales of printed newspapers. Their digital transformation included digital edition of the newspaper, a version for smart devices and device- adaptive Web page. The publisher of social games and books Ravensburger still had a stable and profitable core business, but used digital technology and offered online purchasing, e-books and online gaming. Each of the companies had a different approach to the digitalization process, but it is common to all of them that, as many other media companies, most of the revenues related to digital business were realized from ads and paid content (Hess et al., 2016). These examples show that DT is important for long-term financial potential by creating new sources of revenue. An often mentioned example of a company that is successfully using digital technology is Starbucks, whose poor performance in 2009 and resulting significant stock price decrease prompted the company to focus on technology to build a new business model with customers. According to the latest data, 11% of all transactions at Starbucks go through a mobile ordering and payment application, and in 2017, 30% of transactions in stores were paid via mobile phones (CNBS, 2018). The investment in technology paid off, which is evident through the profit the company realized from 2010 onwards as well as through the share price. New business models are therefore another business change that is related to DT. For the process of digital transformation companies should define a digital transformation strategy that, according to Matt, Hess & Benlian (2015) should include four basic dimensions: technology use, change in value creation, structural change, and financial aspects. Through the use of technology, the company should define its attitude towards new technologies in terms of whether it wants to be a market leader or a follower of others in the use of technology, and assess the possibilities of using digital technology in business. The use of technology will surely affect the value chain of the company, so the assessment of this impact needs to be carried out, which also involves assessing the needs for structural changes in the form of changes in the organizational structure, etc. The necessary prerequisite is the analysis of the financial aspects of digital transformation. For example, companies facing a downturn must look for a revenue increasing solution and digital transformation could bring that, but in such a situation access to funding sources can be a limiting factor for transformation. On the other hand, companies that currently do not have business problems can delay the transformation and thus be faced with potential problems in the future. As stated earlier, technology usage is one of digital transformation strategy basic dimensions. Most commonly used types of Information systems for supporting business processes are related to Enterprise Resource Planning, Customer Relationship Management, Supply Chain Management and similar systems. "Enterprise Resource Planning (ERP) has been readily making inroads into enterprise computing, became the focus of innovation, replacing traditional functional Management Information Systems, and finally established itself as the main stream of enterprise computing" (Wu Horng-Jyh, 2016).

Importance of ERP is stated by many authors defining ERP as a system that “encompasses a wide range of software products supporting day-to-day business operations and decision-making” (Ruivo et al., 2014). When it comes to customer data, the presence of CRM systems which “aim to support firms to attract and retain customers, and achieve high levels of sales to them, by fulfilling their needs to the highest possible extent and increasing their satisfaction and loyalty” is essential (Kyriakou, Loukids & Arvanitis, 2016). Over the years, many technological and business infrastructural changes have been introduced to ERP systems, like Web enablement, service-oriented architecture (SOA) paradigm, cloud computing, etc (Elragal & Haddara, 2012). Due to the fact that these information systems contain loads of necessary data, and that the data is used for creating summary performance indicators for various corporate performance management systems or Business Intelligence systems (Tileagă, Nițu & Nițu, 2013), their role as data assets in future digital transformation is of high importance. Main difference in the data coverage of existing information (sub)systems like CRM and ERP is their audience (internal or external users). While CRM encompasses functionalities for external communication with customers, ERP encompasses functionalities for supporting communication and collaboration of internal actors or employees. Ruivo et al. (2014) state that “because of their lower cost and ease of implementation and its use, CRM hold the promise of enabling information made from the CRM to be consumed in ERP and across the extended enterprise”. Even though ERP and CRM are strongly connected via data and work as a whole, practice shows that they are also being implemented independently or one without the other. Future strategic initiatives on going digital involve both internal and external user collaboration improvements combining thereby all aspects of communication that is aimed towards impacting new business value creation. Business value creation is essential to build competitive advantages and organizations are trying to upgrade their existing information systems with functionalities related to concepts of digital transformation like customer-centricity or innovation commitment. These efforts are affecting the role of ERP and CRM which needs to be investigated. These two systems are important for investigating with regard to DT because of their twofold significance: a) They are heavily impacted by DT; and b) they are essential for supporting financial processes and measurement of operational financial results. Our initial research showed a lack of academic and practical reports due to the relatively new area of digital transformation. Nevertheless, due to the high relevance of this digital shift, we developed the following research goals: (i) to provide basic bibliometric analysis about research in this field and (ii) to investigate the key challenges of digital transformation on these two types of existing systems, namely ERP and CRM systems as reported in found academic publications. To achieve these goals, the literature review is conducted (Section II) by searching Scopus, IEEE and Web of Science databases, and the analysis of the results about DT and ERP and CRM is presented (Section III). Next, the implications of the results are extracted (Section IV). Finally, the conclusions are given and the suggestions for the future research are indicated.

## **2. SELECTION OF PAPERS ON ROLE OF ERP AND CRM IN DIGITAL TRANSFORMATION**

Literature review was conducted in order to find the publications of the interest for our research, so three scientific data bases (IEEE, Web of Science and Scopus) were searched in December 2018 based on a combination of keywords (Table I). The additional qualitative analysis was performed after the publications were collected. Search of Scopus resulted in 36 papers, Web of Science (WoS) resulted in 3 papers, all of which were matching the Scopus results. IEEE search gave 4 papers, whereby one paper was already in the Scopus results and 3 papers were added to the pool, resulting thereby with a of total 39 papers to be analyzed.

*Table 1: Search strategy (Authors)*

<b>WoS search strategy</b>	<b>WoS Hits</b>
TOPIC: (( "digital transformation" AND ( "enterprise resource" OR "customer relationship" ) ) ) Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.	3
<b>IEEE search strategy</b>	<b>IEEE hits</b>
"digital transformation" AND ( "enterprise resource" OR "customer relationship")	4
<b>Scopus search strategy</b>	<b>Scopus Hits</b>
TITLE-ABS-KEY ( "digital transformation" AND ( "enterprise resource" OR "customer relationship" ) )	36

Since our focus was on the impact of digital transformation on the role of EPR or CRM systems, we developed the following criteria for the selection of papers: (1) an article is considered relevant, if it specifically covers one of the two existing systems and (2) it is relevant to the digital transformation as a business changing phenomena based on digital technologies. After applying these two criteria on all 39 publications, only 14 publications that were published from 2015-2018 remained for the further analysis. This relatively small number of publications allowed us to analyze the content using qualitative methods and confirmed our assumption about the need for further investigations and tracking this field after the beginning wave of excitement.

### 3. RESULTS OF LITERATURE ANALYSIS

#### a) Analysis framework

In our research we focus on the following aspects of selected papers: (i) report on issues dealing with the design of enterprise architecture since it is often including ERP or CRM; (ii) report on issues concerning CRM or ERP systems in real case studies; (iii) research results in general, but related to digital transformation. These aspects are presented in Table II, in which the first column presents the authors and the year of the paper and the second column presents the most important issues reported in analyzed publication.

#### b) Analysis of the papers

By examining digital transformation initiatives and experiences described in the selected papers, we wanted to investigate key challenges of digital transformation on two types of existing systems: ERP and CRM systems. For this purpose, based on our research and practical experiences and insights, we sketched our framework of following five possible Impact Options:

1. DT sets new demands on the Enterprise architecture (EA);
2. DT influences the reconfiguration of customer relationship management systems;
3. DT influences the reconfiguration of enterprise resource planning systems;
4. DT and related technologies impact significantly data extracting and storing requirements;
5. DT forces agile front-end and systematic structured cautious back-end subsystems to work seamless as one.

Based on the qualitative analysis of selected publications found in Scopus, IEEE and WoS, results show that the most often presented Impact option of DT is the one on the Enterprise Architecture (1) and the way of data extracting and storing (4), which are presented in five analyzed papers. Four papers focus on reconfiguration of CRM (2), as well as on seamless one acting information system (5), and three papers address reconfiguration of ERP (3).

*Table following on the next page*

*Table 2: Literature analysis report on changing role of ERP and CRM in DT (Authors)*

Publication	Leading idea	Impact options from III.B.
Babar & Yu, 2015.	<ul style="list-style-type: none"> <li>Significance of Enterprise architecture in strategizing, planning and execution of digital transformation;</li> <li>Need for an omnichannel;</li> <li>New features for connecting front-end and back-end systems.</li> </ul>	(1); (4); (5)
Van Belleghem, 2015	<ul style="list-style-type: none"> <li>Importance of understanding emotional and rational part of a relationship for achieving digital perfection;</li> <li>The reconfiguration of CRM could be assessed by evaluating companies by two axes: 'the digital' and 'the human', squeezing companies in one of four different situations: (1) A quick death (digital-low, human-low), (2) Strong today, but not enough for tomorrow (digital-low, human-high), (3) A fighter's market (digital-high, human-low), and (4) When digital becomes human (digital-high, human-high).</li> </ul>	(2)
Cocca et al., 2018	<ul style="list-style-type: none"> <li>Business requirements that drive DT: customers, internal processes, workforce, supply chain, and sustainability.</li> <li>Analysis of SAP components (ERP, SCM, Supplier Relationship Management - SRM, CRM, Product Lifecycle Management - PLM, Human Capital Management - HCM, and Connected Manufacturing - CM) within the categories.</li> </ul>	(3); (4)
Haggerty, 2017	<ul style="list-style-type: none"> <li>DT's effect on the healthcare industry</li> <li>Issues of handling volumes of data created by numerous connected devices.</li> </ul>	(4)
Harkai, Cinpoeru & Buchmann, 2018	<ul style="list-style-type: none"> <li>Need for an agile modelling language that provides a diagrammatic and, at the same time, machine-readable integration.</li> </ul>	(1)
Masuda et al., 2018	<ul style="list-style-type: none"> <li>Findings related to EA structure and IT Governance;</li> <li>Identification of two Critical Success Factors: (1) Commitment and (2) Collaboration.</li> </ul>	(1)
Walther, 2018	<ul style="list-style-type: none"> <li>Detailed case study of DT in the constructions/ manufacturing cement industry.</li> <li>Specialized tools extract, aggregate, calculate and display operational and business data from a variety of information sources, including ERPs, data warehouses, production databases, document management systems etc. in order to improve the use of data.</li> <li>With the implementation of Industry 4.0. technologies, the question of availability of data and of where to store data arises.</li> </ul>	(3); (4)
Reiter & Young, 2017	<ul style="list-style-type: none"> <li>Case study of DT in the water industry, explaining their orientation to the customer- centric model.</li> <li>Business focuses on meeting customer needs in a streamlined and efficient manner delivering services and products to customers.</li> </ul>	(2); (5)
Asprion, Schneider & Grimberg, 2018	<ul style="list-style-type: none"> <li>ERP systems and its role in competitive differentiation;</li> <li>Systems of engagement (for collaboration, communication, interaction) are more agile then systems of records (ERP).</li> <li>The impression is that the role and purpose of ERPs was strongly oriented towards data optimization and supporting processes, leaving other business demands "like user-experience and user-engagement" becoming developed with different intensity and goals.</li> </ul>	(3); (5)
Fleig & Maedche, 2017	<ul style="list-style-type: none"> <li>Case study of a leading German manufacturing corporation.</li> <li>Development of a Decision support system based on input data in form of event logs.</li> </ul>	(4)
Konlechner, Müller & Güttel, 2018	<ul style="list-style-type: none"> <li>Investigation of the impact of DT on EA.</li> <li>Conclusion is that EA needs to be reconceptualised due to the need to create systems that contribute to acting on real-time information.</li> </ul>	(1)
van Gils & Proper, 2018	<ul style="list-style-type: none"> <li>Investigation of key challenges of DT on enterprise (architecture) modelling languages;</li> <li>EA tools could contribute to readiness DT by focusing on value co-creation.</li> </ul>	(1)
Krämer, Tachilzik & Bongaerts, 2016	<ul style="list-style-type: none"> <li>Detailed analysis on how the role of CRM in organizations is changing due to DT;</li> <li>Messenger apps, social media forums and platforms and self-service portals, become more in the focus of the customer-centric approach.</li> </ul>	(2)
Earley, 2014	<ul style="list-style-type: none"> <li>Richer understanding of users and their needs among other, is resulting in using multiple data streams, and having more data means that the potential combination expand exponentially.</li> <li>Therefore, he claims that "Big data and new customer experience technologies are game changers".</li> </ul>	(2); (5)

#### 4. RESULTS OF THE ANALYSIS ON THE CHANGING ROLE OF ERP AND CRM IN DT

Technological influence is shifting the communication and collaboration channels from institutions or groups as customers to individuals (Bongiorno, Rizzo & Vaia, 2017). Customer-focused services and products as well as direct customer relationships are personalized and individualized due to customer's subjective preferences (Komarov, Kononov & Kazanstev, 2016). Traditional ERP and CRM systems are more oriented towards transaction-processing rather than analytical-processing, making it "difficult to modify and to implement custom requirements" (Grabis & Kampars, 2018). The change in the way of collaboration is leading to reconceptualization of IT away from "functional silos but as fully integrated with all other business units under one digital footprint" (Carcary, Doherty & Conway, 2016). Based on our research and practical experiences, our framework of five possible Impact Options was confirmed as possible key changing roles:

1. DT sets new demands on the Enterprise architecture; Design and development of EA is changing due to Digital transformation. The changes are visible in the need for new methods and techniques, as well as in tools for constructing new features or new configurations. EA needs to be more oriented towards strategizing, planning and execution of DT so that the EA meets requirements of changing business. The "updates" of existing languages and tools need to enable value co-creation and modeling (van Gils & Proper, 2018), provide a diagrammatic but machine-readable integration (Harkai, Cinpoeru & Buchmann, 2018), support collaboration of various actors involved in architectural design, and offer methods and techniques for customer experience modelling.
2. DT influences the reconfiguration of customer relationship management systems; What happens when digital perfection is achieved, and the results are measured only by numbers? Will the human aspect matter at all? Belleghem (2015) defines four possible reconfiguration options of CRM depending on the digital and human focus. Although digital natives and other generations have different expectations, some operations could be left out of going digital intentionally. On the other hand, customer-centricity is important for DT and it impacts the way customer data is retrieved and used. Customer experience and customer journey management need to be integrated in some way into other CRM processes.
3. DT influences the reconfiguration of enterprise resource planning systems; Customer's needs and expectations change quickly, more faster than the traditional product lifecycle can handle it; and towards implementing the mass-customization paradigm (Cocca et al., 2018), companies need to accelerate their innovation processes, make their supply chains more flexible, keeping in mind track-and-trace and sustainability issues. Meanwhile resources consumed for generating services and products are more connected, more intelligent, more adaptive, more agile, more responsive, and more predictive, just more of everything. Traditional ERPs can handle only so much of DT customization requirements, calling thereby for reconfiguration of their role. Another important aspect of ERP's role is related to financial potential management and the reinvention of value creation, new revenue streams and new business models.
4. DT and related technologies impact significantly data extracting and storing requirements; Although challenged in terms of storing masses of unstructured data, but still valuable as data sources, ERP and CRM systems in combination with IoT, Big data, data analytics are setting new standards on data volumes. Everything is captured, processed, stored and/or shared. Security issues and issues regarding General Data Protection Regulation are important, but for many average consumers of less significance in relation to their need for consummation of services. A good balance of security and mass intelligence is vital.
5. DT forces agile front-end and systematic structured cautious back-end subsystems to work seamless as one. Whatever EA defines as most suitable, and whether the Systems of

Engagement and Systems of Records are integrated or not, the most important customer demand is the constant availability of services, anytime, anywhere. Vendors offer some range of software solutions or platforms to support DT in terms of integrating front-end and backend systems, enabling vertical and horizontal integration, end-to-end operations across the entire value chain, and other business transformation collaboration models, but this is still in early phases of maturity.

## 5. CONSLUSION

It is evident that digital transformation in companies is a necessity. The speed and the approach will certainly depend on the industry in which an enterprise operates, size of the company and its level of digital maturity. In our work we focused on investigating how the role of enterprise resource planning and customer relationship management systems is changing in the context of digital transformation. Our analysis showed that there are clear indications that the configuration and functionality covered by classical ERP and CRM systems will change and the same change is expected for enterprise architecture methodologies for their design and development. CRM systems represent the first level of engagement and they rely on ERP systems that encompasses transactional data. The development of new digital technologies provides an opportunity to engage in a different way through the introduction of digital enterprise platforms. The implementation of DT or industry 4.0. technologies impacts also the data extracting and storing requirements, whereby the end customers do not want to be bothered – they must get a seamless whole service through an omnichannel. Approaches of this kind of analysis have some limitations. First, we only considered high-qualitative academic contributions for our literature review and aimed to identify a representative sample for gathering insights into this subject matter. Second, our analysis framework of impact options is built upon implication from our research and practical experience. An extensive quantitative and qualitative validation of real DT initiatives is needed so that this field of interest could be analyzed on a broad scale. Also, in-depth studies are needed to determine in more detail how and to what extent the role of ERP and CRM is changing, which offers a field with a great potential for scientific and industry professionals.

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# DOES THE CATALAN CRISIS HAVE ANY INFLUENCE ON THE REGION'S TRADE WITH THE REST OF SPAIN?

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## ABSTRACT

*The aim of this contribution is to determine whether the conflict in Catalonia in some way influences the region's trade relations with the rest of Spain. Empirical analysis based on gravity model approach indicates that trade and intrastate conflict in Catalonia are related. Catalan exports to the rest of Spain are negatively associated with past values of conflict in the region. Testing for endogeneity shows that there is a reciprocal relationship between conflict and trade. Nevertheless, the 2SLS estimator shows very similar results to the Poisson's as well as the FE estimators.*

**Keywords:** *Catalonia, conflict, gravity model, interregional trade*

## 1. INTRODUCTION

In recent decades, there has been an important wave of separatism in Europe, from which many movements escalated to secessionism. According to Wood (1981), separatism primarily seeks to limit the role of central authority in a specific area and thus to achieve a greater degree of autonomy. Some separatist movements pursue secession, seeking to break out of the sovereign power of the central government and to create a fully independent state. One such movement is the Catalan crisis, where high support for independence escalated in violent conflict with the Spanish state (Heidelberg Institute for Conflict Research (HIIC) 2018). Following the trade-conflict literature (e.g. Martin et al., 2008; Marano et al., 2013), I suppose the conflict in Catalonia to affect bilateral trade with the Rest of Spain. While some scholars (Djankov and Freund, 2002; Fidrmuc and Fidrmuc, 2003; or de Sousa and Lamotte, 2007) argue that political disintegration leads to economic decline, I reverse this argument and suggest that economic disintegration, such as the trade diversion, can actually occur well ahead of political break-up. Although this argument is not entirely novel, this is the first time this approach has been applied to the current separatist movements in Europe. Therefore, the aim of this contribution is to determine whether the Catalan conflict with its Spanish state negatively affects their bilateral trade. Should the region become independent, a new border separating an independent Catalonia from the neighboring country would undoubtedly increase the transaction costs of its bilateral trade. There is rich empirical evidence on the negative effects of physical border on exchange of goods and services between two countries (McCallum, 1995; Helliwell, 1996; Nitsch, 2000). Following their approach, I use the gravity model for the period 2002-2017. The dataset covers flows of goods from Catalonia to seventeen Spanish autonomous regions.<sup>1</sup> Whereas a majority of scholars pay attention to the consequences of Catalan independence,<sup>2</sup> I suppose the Catalan crisis to already have had negative effects on bilateral trade. I expect Catalan producers to diversify their sales markets in order to decrease their dependence on the local market and therefore lower their possible losses should the region become independent. Therefore, the higher the level of conflict between Catalonia and Spain, the lower the motivation of economic agents to trade with partners from the rest of Spain. Moreover, in the case of Catalonia, some local producers have been already pushed to try to sell their production abroad as a consequence of the boycott of their products by consumers from the rest of Spain.

<sup>1</sup> Both autonomous cities –Ceuta and Melilla– are treated together as another autonomous region.

<sup>2</sup> For example Buesa (2009), Ghemawat (2011), Comerford et al. (2014), Marinzel (2014), or Feito (2014).

The boycott took place in 2005 and was, above all, related to the typical Catalan product, cava, a sparkling wine similar to champagne (Guinjoan and Cuadras, 2011). The paper has the following structure. The next part briefly presents the evolution of the current political crisis in Catalonia. Then I move to a review of the literature and my hypothesis. The fourth part presents the gravity model analysis including the results of the regressions, while the last section concludes.

## 2. CATALONIA: CONFLICT AND TRADE

More recently, there has been a significant increase in support for independence. Even though the conflict between Catalonia and Spain has not been militarized, the high percentage level of support for secession and the categorical refusal of the central government to negotiate constitute important friction points. According to the HIIK (2001-2018), the conflict in Catalonia has existed since 2008. It was intensified in 2016 especially after the *Junts pel Sí* (Together for Yes) coalition voted for unilateral secession from Spain. The Spanish Constitutional Court abolished this resolution and threatened imposing sanction in case of an insubordination on the part of the Catalan government. In 2017, when an unofficial referendum was held, the conflict reached a level of violent crisis (see Figure 1).

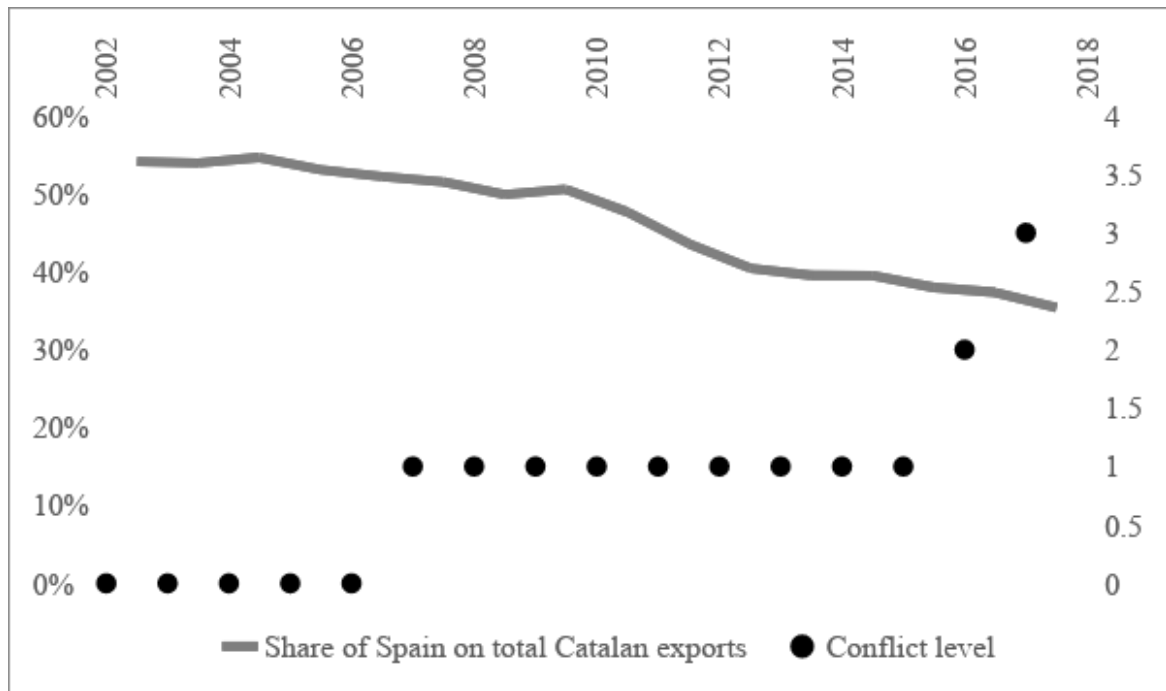


Figure 1: Share of export flows to the rest of Spain on total Catalan exports (left axis) and the conflict level (right axis) (C-interreg. CEPREDE, 2018; HIIK, 2002-2018)

Simultaneously, the share of Catalan exports to the rest of Spain decreased as a proportion of their foreign exports. As Figure 1 shows, whereas the conflict increased, the relative importance of Spain as a buyer of Catalan exports decreased (with the exception of the outbreak of the last economic crisis) over the entire period under review. However, this graph is not evidence of a causal relationship between the two indicators. Moreover, the importance of Spain had already had a downward trend before the studied period and the same trend was also plausible in the case of other autonomous regions (C-interreg. CEPREDE, 2018). Consequently, a more detailed analysis is required in order to determine whether the political crisis in Catalonia is or is not negatively associated with Spanish-Catalan bilateral trade.

### 3. LITERATURE REVIEW

Although with mixed results, many scholars have analyzed the relationship between political conflict and trade. Nevertheless, its causality remains unclear. In general, the existing literature identifies four corollaries:

1. Economic integration among countries lowers the costs of secession;
2. Economic disintegration within a national state precedes the political;
3. Intense trade deters political conflict;
4. Political conflict negatively affects trade, especially between belligerents.

The first two groups of corollaries focus on the relationship between economic integration and political disintegration. Some scholars argue that world trade integration creates separatist regions to promote foreign trade. The influence of international economic integration on the disintegration of national states has been widely studied by researchers all over the world. In general, they point out that separatist regions tend to be positively inclined to support the integration of the whole country in free trade agreements and organizations (e.g. Naisbitt 1993, Shulman 2000, Sorens 2004, Dvořáková and Ferrarová 2014). In the field of political economics, Alesina et al. (1997) argued that the free market leads to secession mainly because openness reduces the costs associated with the small size of the country and thus its small domestic market. For this reason, the size of the country in the integrated world is not decisive and has no negative effect on levels of income. Instead, the heterogeneity in local preferences leads to the creation of smaller jurisdictions. Hence economic integration generally facilitates foreign trade and thus also leads to a decrease in dependence on the domestic economy. This at least partially offsets the costs associated with the limited size of the domestic market. For Martin et al. (2008), foreign trade acts as insurance, as it represents a substitute of trade within national borders. With regard to the European economic integration, Dvořáková and Ferrarová (2014) further point out that the EU disturbs the direct link between voters and local decision-makers participating in the decision-making process. This is a consequence of the fact that the Union weakens the links between the national state and its individual regions and promotes the national identity of its regions. Conversely, Djankov and Freund (2002), Fidrmuc and Fidrmuc (2003) or de Sousa and Lamotte (2007) focused on the economic disintegration that follows the political. All these contributions follow the same goal, which is to determine how political disintegration affects trade relations among the members of the disintegrated state. Nevertheless, the relationship of secession and international trade of a country or region may not be so straightforward and simple. It is not only about the drop in mutual trade that follows the secession of the region from the continuing country, i.e. economic disintegration that follows the political. There is also rich empirical evidence that shows that economic disintegration often precedes the break-up of a given country. In their analysis based on the gravity model approach, Schulze and Wolf (2008) studied the trade diverting effects of ethno-linguistic networks. They focused on the Habsburg Empire in the late 19th century and find that the political borders that separated the successor states of the Empire after the First World War were already visible 25-30 years prior to the conflict. The argument of economic disintegration preceding the political is also advocated by Suesse (2014). He shows that the rise in likelihood of secession among the former Soviet Union's republics led to a drop in intra-Union trade. In his opinion, this happened in the late 1980's. The economic disintegration preceded the political break-up and its consequences led to a huge drop in the output of the late Soviet Union. The expectations of secession are also supposed to deter investment among the integrating parts of some major political units, which aggravates even more the economic slowdown. Martin et al. (2008) observed that there is a fall in trade prior to the onset of civil war and Daumal (2011) shows that increasing separatism in Quebec has had a positive effect on Canadian foreign trade.

Hence, the theory shows that an increased support for secession is expected to lead to economic disintegration. But how can these tendencies be observed in practice and what is the mechanism that makes separatists seek trading markets abroad? Identifying the links between trade and conflict may help to cast light on the motivations of those economic agents involved. With regard to the third and fourth groups of corollaries, many economists and political scientists paid attention to the causal relationship between trade and conflict. On the one hand liberals, pioneered by Polachek (1980), see trade as guarantor of peace. According to them, if two countries trade it is because it is beneficial for both. Consequently, they compare the loss of forgone trade with the gains from conflict which discourages them from entering the dispute (Polachek, 1980; Oneal and Russett, 1997; Carter and Goemans, 2014). On the other hand, for the realists this cause and effect relationship does not hold, as the trade relations are not symmetric and states fear for their security. Therefore, trade itself might become a source of conflict (Barbieri, 1996; Barbieri and Schneider, 1999). For Martin et al. (2008), these effects are mixed. While trade deters from conflict due to opportunity costs, it also offers the possibility of substituting domestic trade by increasing foreign trade, lowering the opportunity cost of forgone trade should the conflict break out. The reverse causality in the trade-conflict relationship has also been deeply analyzed. While some authors paid attention to the effect of militarized interstate disputes on bilateral or multilateral trade (e.g. Gowa and Mansfield, 1993), there is also empirical evidence on the devastating effects of intrastate conflicts. For Marano et al. (2013), intrastate conflict damages trade even more than the interstate and Martin et al. (2008) show that these effects are more persistent over time. For Bayer and Rupert (2004) such intrastate conflict also negatively affects trade with third countries. On the other hand, Pollins (1989) and Kastner (2007) show that military conflict is not necessary. Even ordinary political disputes can have a detrimental effect on the exchange between two business partners. Obviously, there may be some threshold level for which this is true, i.e., low-level conflicts may not affect trade (Davis and Meunier, 2005). Many intrastate conflicts include territorial disputes. For Simmons (2005), confusion over the sovereignty of a certain territory deters economic agents from trading with this territory. Hence the author follows Morrow (1999), for whom traders adjust their business according to their conflict expectations. More recently, Li and Sacko (2002) showed that economic agents anticipate conflict and behave accordingly in order to limit its impact, while Long (2008) states that the level of trade is influenced by conflict expectations because economic agents do not choose to trade with partners with whom they may enter a violent dispute. For this reason, I expect the utility-maximizing economic agents –exporters– to be conflict-averse. If the agents are rational and forward-looking, they may behave accordingly to their expectations and limit their future exposure to the impacts of conflict. Consequently, they are expected to diversify their trading markets in order to lower the risks should Catalonia become independent.

#### 4. GRAVITY MODEL OF CATALAN INTERREGIONAL TRADE

The following regression equation has been chosen in order to determine whether there is any relationship between the support for secession and the volumes of interregional exports of Catalonia:

$$\ln\_Export_i^t = \beta_0 + \beta_1 \ln\_GDP_i^t + \beta_2 GDPcap_i^t + \beta_3 \ln\_Distance_i + \beta_4 Contiguity_i + \beta_5 Sea_i + \beta_6 Conflict^{t-1} + \gamma t + \varepsilon_i^t \quad (1)$$

The dependent variable accounts for export flows from Catalonia to the rest of Spanish regions during the 2002-2017 period. The data was retrieved from the C-interreg. CEPREDE database (2018). The right side of the regression equation includes the following terms.

- GDP, which represents the gross domestic product of a given autonomous region. I expect this variable to have positive effect on the Catalan exports, as the larger the GDP the higher the ability of the region to absorb Catalan production (Bubáková, 2013). The data for this GDP variable was retrieved from the Spanish National Institute of Statistics (INE, 2019a).
- GDP per capita (INE, 2019a) expresses the purchasing power of those who participate in the market (Bubáková, 2013). According to Nilsson (2000), the expected sign of this variable is unclear, because of the role of the population component. The larger the population, the larger the domestic market. Nevertheless, the larger the country's market, the lower its need to trade, as a consequence of its higher self-sufficiency due to the labor division and economies of scale.
- The Distance term should influence the dependent variable in the opposite direction, as the larger the distance the larger its transaction costs. The data was retrieved from the geobytes.com website and is based on the great circle approach. The distance is in kilometres and is measured from Barcelona to the capital of the corresponding region.
- Contiguity is a dummy variable that takes the values of 1 for regions adjacent to Catalonia and 0 otherwise (Bubáková, 2013).
- Sea is 1 if the region has access to the sea and 0 otherwise. According to Glick and Rose (2015) the parameter estimate of this variable should be positive, as the transportation costs may be lower for regions with access to the sea than for the landlocked ones. My expectations are mixed, as I suppose great part of the Catalan trade with the rest of Spain to be delivered via land transport.
- Conflict variable accounts for the level of conflict as reported by HIIK (2003-2018). It ranges from 0 to 3. Following Li and Sacko (2002) and Kastner (2007), in the PPML and the FE models, this variable is used one period lagged due to the possible simultaneity bias and because I expect trade to be influenced by the previous values of conflict.
- $\gamma_t$  represent time dummies which control for all events which are specific to the year  $t$ .
- $\beta_0$  is an intercept.
- $\varepsilon_i^t$  is the error term.

It is a balanced dataset as there are no zero (missing) trade flows. In the first step, I used two different estimation techniques. The first one is the Poisson model (PPML) with QML standard errors proposed by Santos Silva and Tenreiro (2006) and Martínez-Zarzoso (2011), which solves the displacement problem due to heteroscedasticity of the log-linear form. As the model works with count data, the values of the export flows were rounded to million euros. The second estimation technique is the fixed effects (FE) method with HAC standard errors. The FE estimator deals with the unobserved (individual) heterogeneity, i.e., it captures all the time invariant differences across regions which cannot be observed (Verbeek 2008). As I have mentioned before, there are three main opinions about the relationship between trade and conflict: trade brings peace, trade causes conflict, or conflict negatively affects trade. According to Reuveny and Kang (1996) who tested the Granger causality between trade and conflict/cooperation, the dyad dependent causality is reciprocal. Moreover, following Martin et al. (2008) and Suesse (2014), I expect the fall in trade to anticipate the deepening of the crisis. Hence, if the relationship between conflict and trade is reciprocal, my conflict variable would be endogenous and, consequently, the estimates might be inconsistent (Goenner 2011). In such a case, it would be more appropriate to use an instrumental variable (IV) approach. Goenner (2011) suggests using the Two-stage least squares (2SLS) estimator as the most efficient IV estimator. In the trade-conflict relationship debate, it was also used by Keshk, Pollins and Reuveny (2004), and Hegre, Oneal and Russett (2010). The first stage consists of OLS regression of the endogenous variable on all the exogenous regressors and instruments included in the model.

The fitted values from this regression are expected to be uncorrelated with the error term. The second stage OLS regresses the dependent variable on constant, exogenous regressors and the saved fitted values from the first step. The 2SLS implemented in gretl also provides me with the Hausman test, which can help identify whether or not conflict is endogenous. If there is endogeneity in the data, then one has to find almost one valid instrument. Nevertheless, the exogeneity of the instruments can only be tested if the model is over identified, i.e., I have to have more instruments than endogenous regressors. Gretl also automatically provides a test of the strength of the instruments. The simplest way to interpret the results is to use the rule of thumb and look on the F-statistic (of first order) for the instrumental variables. If it is larger than 10, the maximum bias in IV estimators should be less than 10%. In the case of Catalonia, I have chosen the share of expenses on education on the total Catalan expenditures. According to Boylan (2015), the main reason for support of independence in Catalonia is the vertical fiscal imbalance. The author points out that the Catalan regional government has sufficient control over spending, but not over revenues. The large redistribution of income among the Spanish autonomous communities is to a great extent financed by the Catalans. Catalonia contributes about 19% to the Spanish tax base. However, it only gets around 14% back. Catalans demand a change in the tax system so that they can either levy taxes or change the redistribution system, complaining about the shortage of resources for health and education. Their grievance towards the central government even increased during the last global economic crisis, due to belt-tightening by the central government (Guzmán Ramírez and Quiroga Riviere, 2014). For this reason, I expect the expenses on education to be almost partially correlated with the conflict variable, while uncorrelated with foreign exports. The data for this variable (INE, 2019b; Datosmacro.com, 2019) was available only from 2002 and thus reduced the period under review by two years. The second instrument, as suggested by Cameron and Trivedi (2005), is the lagged value of the conflict variable. The Hausman test indicated (on a 5% level of significance) the need to use the IV approach. The value of the first-stage F-statistic was significantly larger than 10 which, along with the high p-value of the Sargan test (0.274), indicates that the instruments might not be either weak nor endogenous.

*Table 1: Results*

	PPML	FE	TSLS
const	-3.083 (1.923)	-4.365 (17.52)	-12.3 (9.693)
GDP	0.5489*** (0.0272)	1.762 (1.119)	0.7685*** (0.0648)
GDP per capita	0.2717* (0.1647)	-1.862*** (0.7051)	0.8561 (0.8434)
Distance	-0.2182** (0.0962)		-0.3106 (0.3249)
Contiguity	1.026*** (0.0893)		1.004*** (0.348)
Sea	-0.2653*** (0.0501)		-0.05418 (0.2455)
Conflict			-0.3083*** (0.1125)
Conflict_1	-0.3603*** (0.1335)	-0.4449*** (0.0741)	
Time dummies	YES	YES	YES
Observations	238	224	238
R <sup>2</sup>	0.8589	0.9584	0.8183
SE	HAC	QML	HAC

The \*, \*\* and \*\*\* indicate significance on 10, 5 and 1% level of significance.

Table 1 reports the results of the three estimations. Despite the results of the Hausman test, I also report the results of the other two estimation techniques. The reason is that while there are differences across all the parameter estimates of the other variables, the estimates of the conflict variable are in general very similar. The parameter estimate is always negative and statistically highly significant, which means that the Catalan crisis seems to be associated with lower values of the region's exports to the rest of Spain. According to the 2SLS estimator, one standard deviation in the Conflict variable is, ceteris paribus, associated with the 31% decrease in export flows. With regard to the other control variables, the 2SLS estimator shows that, controlling for other effects, GDP is positively associated with higher values of interregional exports of Catalonia, whereas the GDP per capita is not statistically significant. From the variables accounting for geographical attributes of the regions, the only one that is statistically significant is Contiguity, which means that, all the things equal, Catalonia trades 2 times more with adjacent regions than with remote ones.

## 5. CONCLUSION

Many authors aim to show that international economic integration leads to political disintegration within a country. Others observe that economic disintegration within a state anticipates political break up. I add to the discussion with a specific focus on the current crisis in Catalonia. The review of the literature showed that trade and conflict are related. The economic agents make their expectations about future conflict and behave accordingly, in order to prevent future loss. The results of my gravity model analysis shows a negative effect of the Catalan crisis on the region's trade with the rest of Spain. Therefore, conflict in Catalonia is associated with trade disintegration. Although the Hausman test indicated possible endogeneity problem, the estimated Conflict parameter provided by the 2SLS was similar in both sign and magnitude to the PPML and FE estimate. The signs and magnitudes of almost all the parameter estimates are in accordance with the previous literature, which strengthens confidence in my findings.

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# THE ROLE OF SMALL AND MEDIUM-SIZED ENTERPRISES IN THE DEVELOPMENT OF THE REPUBLIC OF SERBIA

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## **ABSTRACT**

*The SME sector plays a vital role in the economic development of a country nowadays. The sector is perceived as an initiator of economic growth and development since most of business activities begin in this sector. Moreover, it leads to increasing employment and decreasing regional unevenness. The importance of the SME sector in Serbia is also demonstrated by the fact that these enterprises participate in all economic indicators (the number of enterprises, import and export of Serbian economy, share in total turnover, etc.). Through this sector it is possible to develop an economy based on innovation, knowledge and new technologies. The aim of the paper is to indicate a crucial role of small and medium-sized enterprises in the development of the Republic of Serbia; that is, gaining a competitive edge in a global marketplace.*

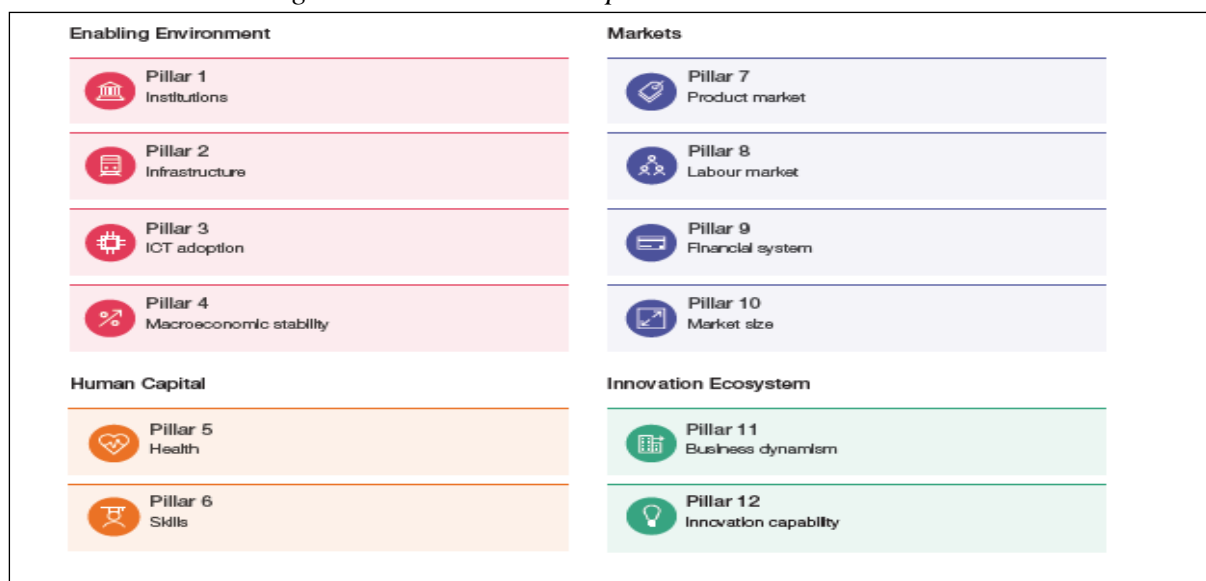
**Keywords:** *small and medium-sized enterprises, development, competitiveness*

## **1. INTRODUCTION**

The Republic of Serbia has recently undertaken various activities to improve its position in a global marketplace. This market is characterized by the elements of non-price competition, such as product quality, innovation, specific features of a product etc. Consequently, Serbia and all transition countries are in an unfavourable position, because they are not treated as equal partners. It is considered that products from western countries are far better, thus additionally increasing the difference between the products and building barriers to international competitiveness. The Organization for Economic Co-operation and Development (OECD) defines competitiveness as a degree to which a country produces goods and services in an open market and tackles the international competition test while maintaining and increasing real gross domestic income. Competitiveness is a set of institutions, policies and factors that determine the level of productivity of the country (WEF). In 2018, based on the report of the World Economic Forum, Serbia was ranked 65<sup>th</sup> out of 140 countries with a GCI value of 60.9 (the theoretical value ranges from 0 to 100 according to a new methodology). The 2018 report was conducted according to a new revised methodology. As for competitiveness, it is still assessed according to 12 pillars; however, the pillars have been named differently with different position, structure and method of calculation. (Figure 1).

*Figure Following on the next page*

Figure 1: The Global Competitiveness Index 4.0 2018



Source: <http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2018.pdf>

To calculate the Global Competitiveness Index (GCI) according to the new methodology, instead of previous 114 indicators 98 indicators are used out of which 64 indicators are completely new. The index is now calculated for all economies in the same way and the final value of GCI is an average of 12 pillars, so that the implicit weight of each pillar amounts to approximately 8.3% (1/12) (FREN, 2018). The values of the competitiveness pillars and indicators within the pillars are transformed in a scale of 0-100, where 0 is the worst and 100 being the maximum value. The data from the past years cannot be compared due to different methodologies. Whereas, the new methodology was applied on the data from 2017, therefore the data on GCI and the change of the ranking position of the countries in 2017 and 2018 can be compared.

Table 1: Global Competitiveness Index (2017-2018)

	2017	2018	The change compared to the last year
Albania	57,3	58,1	↗
Bosnia and Herzegovina	54,5	54,2	↘
Bulgaria	62,4	63,6	↗
Croatia	60,1	60,1	=
Hungary	63,4	64,3	↗
FYR Macedonia	n/a**	56,6	-
Montenegro	58,2	59,6	↗
Romania	62,2	63,5	↗
Slovenia	68,5	69,6	↗
Serbia	59,2	60,9	↗

Source: WEF, 2018.

\*\* The data for FYR Macedonia are not available

Compared to 2017, Serbia made a progress of 2.87% as well as Montenegro and Romania with a growth of 2.41% and 2.09%, respectively. The top position on the ranking list of competitiveness in 2018 was occupied by the US with a GCI value of 85.6 points.

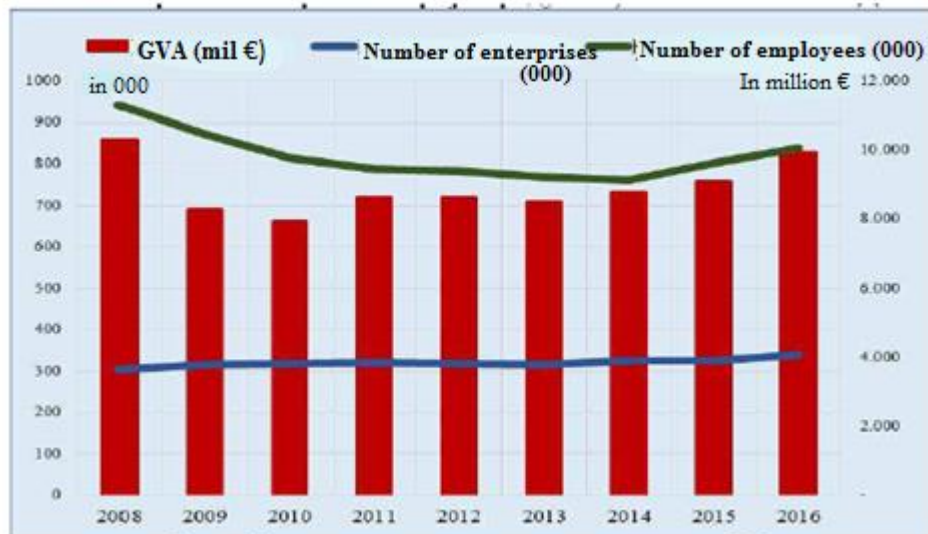
For Serbia the significant growth in GCI was due to the pillar that analyses the ability of the economy to generate new innovations. As for individual pillars, Serbia had the lowest value for the pillar with 39.7 points, which is the case for most other economies, having with the lowest value of 42.3 points average for 140 analysed economies. Based on the questionnaire of entrepreneurs, the accessibility of financing small and medium-sized enterprises, accessibility of capital for new entrepreneurial ventures and stability of the banking system was better assessed. In addition to these estimates, the level of non-performing loans to total loans was also significantly reduced compared to 2017. Since the basic criterion of competitiveness of the modern economy is the ability of the enterprise and the economy sector to reduce operating costs and in that way achieve a competitive advantage, it is necessary to create a favourable environment for business activities of SME sector. In developed countries, entrepreneurship and SME sector have an ever-increasing share in international flows; therefore the state should fully focus on creating a favourable business environment for the development of small business. In today's dynamic and fast-growing economy, business growth has significant importance both from micro and macro-economic perspectives (Hanifzadeh, Talebi, Sajadi, 2017). Easier access to finance, information, tax incentives are just some of the measures that need to be considered more.

## **2. SMALL AND MEDIUM ENTERPRISES SECTOR IN SERBIA**

Entrepreneurship and SME sector are important for the economy of Serbia because the sector accounts for 99.9% of total active enterprises, participating with 35% in its gross value added (GVA) and employing about 2/3 of employees in the non-financial sector. The fact is that this sector is considered the initiator of economic growth and development because most business activities start within this sector (Vujicic, Nikitovic, Cogoljevic, 2016). In 2009, Serbia faced the global economic crisis, which resulted in stopping the positive trends in economic development, such as the decline in economic and foreign trade activity, the rise in unemployment rate, the reduction in investments, etc. In addition to the crisis, transitional movements and restructuring of the economy contributed to the reduction of the number of employees without the beginning of a new investment cycle, which could have re-employed free labour force. In the conditions of the global cyclical impact of economic crises, the issue of the efficiency of economic systems and economic entities was becoming increasingly important and, thus it required reviewing of the strategies and policies for growth and development at all levels. (Ivković et al., 2012). However, in the period 2014-2016, there was a recovery in the entrepreneurial sector in Serbia (Figure 2).

*Figure following on the next page*

Figure 2: SME sector – GVA trend, number of enterprises and number of employees -2008-2016.



Source: (Small and Medium Enterprises Report for 2016, 2017)

In 2016, in all categories of entrepreneurship and SME sector, classified according to size, there was an increase in the number of enterprises (4.8%) and employees (4.5%). Entrepreneurs, along with micro enterprises, contributed most to the growth of the number of entrepreneurship and SMEs (14,808 more enterprises than in the previous year). There was also an increase in GVA, and entrepreneurship and SME sector turnover. In 2016, GVA was 0.1% higher in real terms, and turnover was 3.6% higher. The share of gross value added of entrepreneurship and SME sector in the GVA of the non-financial sector was reduced (from 57.7% to 56.2%) due to the growth of GVA of large enterprises. The export of entrepreneurship and SME increased by 4.1%, but due to significantly higher growth of the export of large enterprises (19.0%) the participation in the export of the non-financial sector decreased (from 44.1% to 40.8%). The share of import of entrepreneurship and SMEs in the import of the non-financial sector remained unchanged (56.3%), due to similar growth of the import of SMEs and large enterprises (7.3% and 8.1%, respectively). The growth of import at a higher rate compared to the growth of export resulted in the increase in the deficit of entrepreneurship and SME sector (11.8%), which was - 511 billion dinars. For the first time large enterprises recorded a surplus in international commodity trading amounting to 54.7 billion dinars.

Table following on the next page

*Table 2: SMEs' development indicators*

	Entrepreneurship and SMEs		Large enterprises		Total		The share of entrepreneurship and SMEs	
	2015	2016	2015	2016	2015	2016	2015	2016
Number of enterprises	324.600	340.112	494	501	325.094	340.613	99,8	99,9
Number of employees	801.719	837.532	418.538	437.910	1.220.257	1.275.442	65,7	65,7
Turnover (in million dinars)	6.302.870	6.609.879	3.197.616	3.539.947	9.500.486	10.149.826	66,3	65,1
GVA (in million dinars)	1.096.750	1.222.519	805.147	953.383	1.901.897	2.175.902	57,7	56,2
Export (in million dinars)	635.312	669.259	804.486	969.179	1.439.798	1.638.438	44,1	40,8
Import (in million dinars)	1.087.080	1.180.263	835.919	914.431	1.922.999	2.094.694	56,5	56,3
Balance on goods (in million dinars)	-451.768	-511.005	-31.433	54.749	-483.201	-456.256	93,5	-
Investments (in million dinars)	300.621,8	-	244.081,5	-	544.703,3	-	55,2	-

*Source: (Small and Medium Enterprises Report for 2016, 2017)*

In 2017 there was positive macroeconomic trend in the Republic of Serbia in terms of public finances, low and stable inflation (approximately 3%), which presents the National Bank's target value and a moderate increase in employment rate (2.5-3%). However, in 2017, there was weak economic growth (1.9%), foreign trade deficit, and poor implementation of structural reforms. Serbia's economic growth in 2017 was the lowest one in the entire Central and Eastern Europe (apart from Macedonia which had low economic growth due to its political crisis). Low economic growth was recorded primarily due to a low level of export and rapid import, as well as due to the drought that caused damage to the agriculture.

*Table following on the next page*

*Table 3: Serbia and the regional countries: GDP growth, in the period 2014-2017*

	2014	2015	2016	2017 <sup>1)</sup>
Serbia	-1,8	0,8	2,8	1,9
Serbia – the trend of economic growth <sup>2)</sup>	-0,8	1,2	2,3	2,9
Central and Eastern Europe (weighted average)	2,9	3,8	3,2	4,5
Regional countries (weighted average)	2,7	3,5	3,7	4,8
Albania	1,8	2,2	3,4	3,9
Bosnia and Herzegovina	1,3	3,1	3,3	3,0
Bulgaria	1,3	3,6	3,9	3,8
Croatia	-0,1	2,3	3,2	3,0
Hungary	4,2	3,4	2,2	3,8
Macedonia	3,6	3,9	2,9	-0,4
Montenegro	1,8	3,4	2,9	4,0
Romania	3,1	4,0	4,8	6,9

<sup>1)</sup> For the countries for which the data on GDP growth in Q4 in 2017 have not been published yet, the growth was estimated based on mid-annual growth in the first three quarters.

<sup>2)</sup> The impact of the draught, flood and poor management of EPS was not included.  
Source: (FREN, 2018)

In 2018, the economic growth of Serbia and other countries of Central and Eastern Europe was rather solid. The trend of GDP growth, employment growth and earnings, inflation stability, low interest rates, etc. continued steadily. The inflation at the end of 2017 was 3%; at the beginning of 2018 it declined and afterwards recovered in May. The total inflation in November 2018 (1.9% mg) was due to food and energy prices. The major importance of SMEs is due to the fact that they are considered to be the driving force of economic and employment growth, and the fact that most business activities start within small enterprises (Hausman, 2005). The main advantages of SMEs compared to large enterprises are reducing barriers otherwise caused by hierarchy, greater flexibility in a decision-making process, a shorter period of feedback regarding the needs of consumers and markets, and easier establishment of partnerships with the enterprises capable of achieving synergy business results (Paunović, Prebežac, 2010). According to the data in 2017, 357,234 enterprises in Serbia were active, generating 1,325,7 billion dinars of newly created value and employed 873,462 people, i.e. it employed 2/3 employees, 56.7% of GVA and 39.5% of the non-financial sector export. In 2017, 43,446 economic entities were established, which is 18,778 more than closed ones (24,668). The total net effect (number of established/number of closed economic entities) in 2017 was positive - 18 new economic entities were established for every 10 closed ones, with more favourable situation for enterprises (304 new ones were established for 10 closed ones) compared to entrepreneurs (16 new entrepreneurs were established for every 10 closed ones).

*Table following on the next page*

*Table 4: Basic indicators of business demography in Serbia in the period 2010-2017*

	2010	2011	2012	2013	2014	2015	2016	2017
<b>Established</b>	44.765	40.706	38.848	39.666	37.311	41.614	42.044	43.446
<b>Closed</b>	46.553	48.869	40.208	39.077	29.669	35.116	24.728	24.668
<b>Net</b>	-1.788	-8.163	-1.360	589	7.642	6.498	17.316	18.778
<b>Net effect</b>	1,0	0,8	1,0	1,0	1,3	1,2	1,7	1,8
<b>Establishment rate expressed in %</b>	13,5	12,5	12,0	12,3	11,3	12,6	12,5	11,7
<b>The rate of closing companies expressed in %</b>	14,0	15,0	12,4	12,1	9,0	10,6	7,3	6,6
<b>Survival rate expressed in %</b>	61,8	63,8	59,1	64,0	67,5	69,3	70,9	73,6

*Source: Small and Medium Enterprises Report for 2017*

In addition to the impact on economic development, the sector of small and medium-sized enterprises boosts the increase in employment and the reduction of regional unevenness. The strategic importance of SMEs is reflected in the following (Avlijaš, 2008):

- Development of the SME sector helps the restructuring of large, inefficient companies.
- SMEs mitigate the monopolistic impact of large companies and the companies offer competitive goods and services according to the changes in modern economies.
- The basic characteristic of small industrial enterprises is to produce primarily for the domestic market, using mainly national resources.

As the entrepreneurship and SME sector represent the backbone of economic development, it is necessary to support the development of small and medium-sized enterprises, especially in transition countries, where the development is mostly supported by foreign investments or state interventions, and economic recession and unemployment are highly present. The best way is to create the business environment favourable for small businesses that would allow small and medium-sized enterprises to have easier access to finance, market and technology information and additional technological knowledge (Spremo, 2011).

### 3. COMPETITION OF THE REPUBLIC OF SERBIA

Taking into account the change in the methodology of calculating the global competitiveness index, Serbia was ranked 65<sup>th</sup> out of 140 countries, which shows that Serbia improved its position for five places compared to its ranking in 2017. (Table 5).

*Table following on the next page*

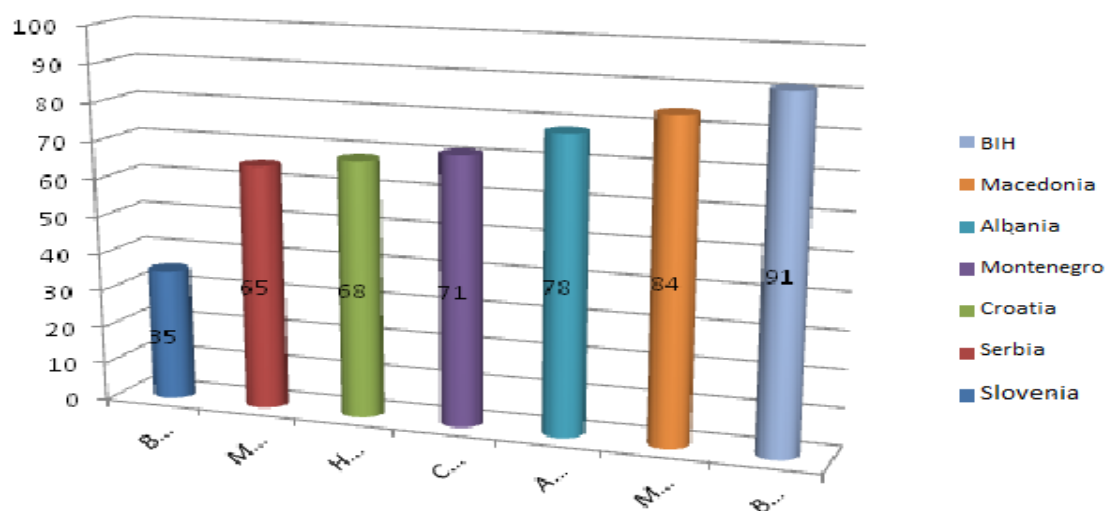
*Table 5: Ranking of the countries according to the Global Competitiveness Index (2017, 2018)*

	2017 <sup>1</sup>	2018 <sup>2</sup>	The change compared to the last year
Albania	80	76	↗
Bosnia and Herzegovina	90	91	↘
Bulgaria	51	51	-
Croatia	66	68	↘
Hungary	48	48	-
FYR Macedonia	n.a	84	-
Montenegro	73	71	↗
Romania	52	52	-
Slovenia	35	35	-
Serbia	70	65	↗

*Source: WEF, 2018*

It should be noted that Table 5. shows the ranking of Serbia for 2017 among 137 countries, and in 2018 among 140 analysed countries. According to the new methodology, the best result in that year was achieved by Slovenia, which remained at the same 35<sup>th</sup> place; Albania which used to be ranked as 80<sup>th</sup> moved to 76<sup>th</sup> place compared to the previous year, while Croatia used to be ranked 66<sup>th</sup> and moved to 68<sup>th</sup> place. Montenegro made a progress, from the 77<sup>th</sup> place in 2017 it was positioned on the 71<sup>st</sup> place, while Macedonia was again included in the rankings and took 84<sup>th</sup> place. Bosnia and Herzegovina was ranked 91<sup>st</sup>, which is the worst result out of 7 countries in the region.

*Graph 1: Ranking of the countries according to GCI 4.0 2018*



*Source: The Global Competitiveness Report 2018, author's review*

*Table following on the next page*

*Table 6: Ranking and the values of Serbia and the regional countries according to Competitiveness Pillars in 2018*

<b>Global Competitiveness Index Pillars 4.0 2018</b>	<b>Slovenia</b>	<b>Serbia</b>	<b>Croatia</b>	<b>Montenegro</b>	<b>Albania</b>	<b>Macedonia</b>	<b>Bosnia and Herzegovina</b>
I pillar: Institutions	35	76	74	63	76	63	91
II pillar: Infrastructure	35	48	36	86	68	86	111
III pillar: Adopting ICT	43	60	53	58	100	58	89
IV pillar: Macroeconomic environment	1	64	106	102	74	102	86
V pillar: Health care	34	67	51	55	97	55	73
VI pillar: Skills	29	56	65	52	45	52	52
VII pillar: Commodity market	27	66	71	45	47	45	87
VIII pillar: Labour market	43	52	96	25	58	25	106
IX stub: Financial system	60	79	62	51	34	51	112
X pillar: Market size	82	75	78	132	105	132	83
XI pillar: Business dynamics	24	59	81	50	108	50	99
XII pillar: Innovation ability	28	56	63	74	48	74	106

*Source: The Global Competitiveness Report 2018, authors' review*

#### 4. CONCLUSION

The competitiveness assessment contributes to the recognition of the current position of the country, and indicates the measures that could significantly improve its competitiveness at different levels. Porter (1990) emphasized that the root of competitiveness is the environment in which the business operates. As today's business conditions are characterized by intense turbulence, there has to be the balance between economic independence and involvement in the international economy. The development of entrepreneurship and SME is an indispensable component for improving Serbia's competitiveness; nevertheless, the companies depend not only on their strategies, innovations and business activities, but also on external factors. It is very important to help existing companies in their business activities by providing a favourable business environment, implementing a model of economic growth based on the revival of industrial production, investments and export, as well as by accelerating reform processes. Obviously, Serbia will have to abandon the expansion of domestic demand, which it has set as a key growth generator, and start with investments.

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# **(WHY) SHOULD ICT COMPANIES IN SLOVAKIA MAKE RESEARCH AND INNOVATION RESPONSIBLY?**

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## **ABSTRACT**

*The presented paper considers the concept of Responsible Research and Innovation (RRI). Existing knowledge on RRI in business context is explored, while specific attention is paid to the implementation and potentials of RRI in ICT companies. Motivation factors of these business entities are discussed, and opportunities together with possible challenges are identified. Argumentation, why and how ICT profit-oriented entities should consider implementation of responsible research and innovation practises, is provided. Finally, a few good practices<sup>1</sup> in applying RRI aspects in ICT research and innovation from Slovakia are presented.*

**Keywords:** *ICT companies, Good practice, Responsible Research and Innovation, Slovakia*

## **1. INTRODUCTION**

Information and communication technologies (ICT) are a well of positive solutions, offering many social and economic benefits. On the other hand, numerous social and ethical issues are raised as a consequence of ICT research and innovation (R&I). A list of actors being responsible in recognizing and reacting on both benefits and risks has been long identified<sup>2</sup>. ICT companies, being one of them, play a very important role in providing socially responsible and sustainable digital technologies for the general good. However, it is true that massive attention to socially responsible R&I in ICT is not consistently paid. The paper of ours is focusing on the concept of responsible research and innovation (RRI), which – as the European Commission defines it – aims to safeguard that research and innovation activities happen via “actions on thematic elements of RRI: public engagement, open access, gender, ethics, science education”.<sup>3</sup> It is important to say that the concept of RRI has been part of actions funded by public resources mostly, leaving behind a great deal of the research and innovation actions in ICT happening on a private base. The presented paper explores the existing knowledge on RRI in business context, while it pays specific attention to the implementation and potentials of this concept in ICT companies. It is also our aim to discover what motivation factors drive these business entities in their RRI actions. Opportunities offered to these entities together with possible challenges they might face within their RRI activities are identified and further discussed in the paper. Additionally, we provide the readers with the argumentation why and how should ICT profit-oriented entities consider implementation of responsible research and innovation practises. Last but not least, we provide a few good practices in applying RRI aspects in ICT research and innovation from Slovakia.

## **2. CONTEXT**

### **2.1. Concept of the Responsible Research and Innovation**

The Responsible Research and Innovation is defined by the European Commission as “the continuous engagement of societal actors during the whole research and innovation process in order to better align both the process and the outcomes of their research, with the values, needs

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<sup>1</sup> ICT companies, with their products, coming from Slovakia, and ICT related projects being implemented by project partnerships, involving Slovak partners.

<sup>2</sup> Naming only a few: policy makers in ICT-related issues, research institutions, universities, think tanks, ICT industry, etc.

<sup>3</sup> <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation>

and expectations of European society”. The RRI is by other words a motivated ambition to create Research and Innovation policy together with the definition of methodologies consisting of the following six core criteria: Ethics, Public Engagement, Gender Equality, Science Education, Open Access and Good Governance. Additionally, RRI considers the consequences and the potential influences on the environment and society and affords equal participation. It also intends to encourage the technological progress and innovations which are directly connected with the expectations and desires of the society, in line with the six above mentioned criteria. It is also important to say that responsibility in ICT research and innovation should be in line with a number of aspects which are defined, giving the R&I in ICT a context. The aspects of responsibility are well advocated by the Social Sciences and Humanities (SSH), defining the criteria and supporting the dialogue between different stakeholder groups. Additionally, the potential of SSH to drive change is emphasized together with the capability to anticipate changes, e.g. in the domains of the future of work in the era of robotics. (Mazzucato, 2018) In this regard we can speak about the RRI informed by SSH in ICT which can be described as: “...a transparent, interactive design methodology by which ICT innovators and societal actors become mutually responsive to each other, towards achieving societal desirable, acceptable and sustainable goals. It is an inclusive approach to research and innovation aiming at opening new ways of thinking about the subject (ICT research), providing new perspectives and points of view. The requirement is the engagement of stakeholders and potential users throughout the research and development stages, especially in the early stages, incorporating their needs in design and methodology. The RRI is expected to work on several levels: societal benefit goals setting (regarding the general human environment), procedures such as involvement of multi stakeholders or ethics check (on the organizations), creation of a common vocabulary and mindset change (on the single personal level). Within this context, SSH contributes in terms of defining the social aspects and perspectives to be ensured or followed by ICT research. ... It helps defining the unintended social and economic impact (and all possible indirect impacts) it may generate, thus aligning both the process and outcomes of R&I, with the values, needs and expectations of citizens and society at large.” (Niglia, Alimenti, 2018, p. 22) As the authors argue, the definition has got an informative, non-exhaustive character and is flexible to be adjusted. Scholtes et al. takes it even further and sees the role of SSH in ICT as a “tool” to understand social phenomena and regain control over the systems that we engineer – all this demonstrated by the example of Tay, the Twitter chatbot developed by Microsoft, which in less than 24 hours of conversation with Twitter users learned to make racist, anti-Semitic, and misogynistic statements. (Scholtes, Strohmaier, Schweitzer, 2017)

## **2.2. Existing knowledge on RRI in ICT business context**

When it comes to RRI set in business context, we can refer to the Innovation Union quote which says that: “We need to do much better at turning our research into new and better services and products if we are to remain competitive on the global marketplace and improve the quality of life in Europe.” This call for action is getting materialized, as: “...customers become more demanding because the environmental imperatives escalate and the behaviour of companies is scrutinised more closely by investors, media and civil society, the responsible innovation imperative grows. Social responsibilities have, up to now, been focused on environmental or human rights issues such as labour standards, worker safety and product safety, this will increasingly expand to consider the focus and processes of innovation for social benefit.” (Sutcliffe, 2011, p. 9) In general, RRI gets to the core of corporate responsibility, (re)defines the role of business entities in the society, their relations and responsibilities for the consequences their products and services have. The concept of RRI is new for a great number of entities dealing with ICT-related R&I, even though some of the for-profit ICT organizations have been in line with some objectives of RRI already. For these a deeper integration of RRI

into company procedures would be way easier. One argument to help this integration is that responsible research and innovation can be understood as a potential to create new opportunities, generally supported by discussion on what kind of future we expect ICT R&I to bring us (Owen et. al, 2013). A number of different responsibilities are already defined for research and innovation activities. Here we can speak for example about the integrity of researchers work, competent management of grants, commitment to keeping ethical principles, etc. Stahl et al suggests that RRI can be seen as a type of “meta-responsibility”, encompassing the existing responsibilities, and serving to ensure that they are aligned and synergic, and promote shared aims or outcomes. (Stahl, Eden, Jirotko, 2013) Seeing it like this, compliance with RRI in ICT R&I starts by mapping and considering the practical implementation of aspects of responsibility in practice. Additionally, the responsibilities are building up a network and exist in a functioning ecosystem. That is why it is important to see it as a complex of interdependent responsibilities leading to an expected outcome. On the other hand, it is discussed that the integration of RRI can get in conflict with commercial interests; this is why the relevance of this concept is questioned by some. (Baldwin et. al, 2013) Another stream proposes that RRI should be linked with corporate social responsibility (CSR) actions. (Porter, 2007) And some other question the concept in general: “How to implement social responsibility and sustainability in digital technologies that we do not know yet how they are going to change our world?”<sup>4</sup>

### **2.3. Motivation factors of the ICT business to implement RRI**

ICT is unique in functions it provides by its nature; transfers, processes, keeps, and manipulates data what opens a wide discussion on ethical and social impacts of its existence. As Chatfield et al outlines, if customers, end-users, or communities reject new digital technologies because of being worried about their possible consequences, this fear can lead to reduction of company's profits, or even turn to a threat for the future of the for-profit organization. Therefore, it is wise if companies recognize this potential threat and considers the RRI aspects within their operation. As Chatfield et al further stresses, based on a study conducted in 14 different countries, almost half of the ICT companies interviewed agree that their primary goal is to ensure appropriate and relevant performance of their products and services. This also means ensuring quality and acceptance of these products and services, what we understand to be the drivers of responsible motivations of these companies. If products and services are not received well, the reputation and profit of the companies are directly affected in a negative way. This first half of the companies, followed by ca one third of all the involved in the interviews, argued that profit is only necessary for survival but they also have broader concerns in enhancing the wellbeing of their customers. The rest of the companies were mostly concerned about the data management and protection. (Chatfield et al., 2017) These outcomes lead us to the understanding of different motivation factors of for-profit entities when involving in RRI and/or when bringing (more) responsibility into their operation.

### **2.4. Why and how should the ICT profit-oriented entities consider implementation of RRI**

Argumentation why and how ICT profit-oriented entities should consider implementation of responsible research and innovation practises, we provide in form of “10 useful tips for how to implement RRI through interdisciplinary collaboration in ICT projects” developed by the Danish Board of Technology (DBT, 2019):

1. Relying on expertise from social sciences and humanities to co-create and cooperate  
Both ICT and SSH fields dispose of a range of different competencies. The cooperation between the two fields can create synergies in the research and innovation process, as the technical part of it is supplemented by ethnographic analysis, network analysis, economic

<sup>4</sup> Question raised at COMPASS final conference, March 26, 2019, Brussels.

and juridical knowledge, etc. Finding a good SSH match for an ICT project guarantees that RRI principles are met, and the co-creating process is beneficial for both the parties and the society.

2. Having a user-centred approach by defining the target audience

It is of great importance to keep in mind who is the target audience and/or end-user of the ICT innovation, what helps not to lose the focus for whom is the product developed and for what purpose. If the desires of the end-users and needs of the society are put in first place, while not compromising any ethical principles, this demonstrates the environment is well known and the responsibility well taken. Considering the role of SSH experts, they support the user-centred approach and eventually help to involve the target audience already in the development process (e.g. in form of participatory product development or by questioning them in order to assist in the innovation development process).

3. Understanding the cultural context while analysing potential markets

When designing and later on launching a new product or service, a great deal of understanding is needed, both in terms of understanding the market, the cultural background, and the mentality. Universality usually does not have to work out, as all these aspects might be very much different in different places. As to the SSH actors, it is their role to support understanding those different contexts, markets and the behaviour of different actors in order to make sure that all the customers and environmental needs are met. This also helps companies to be seen as aware and responsible actors. For example, an ethnographic research can serve as a well of valuable information in better understanding how societies and markets have evolved.

4. Implementing responsible concepts and principles

When conducting R&I in ICT, it is also vital to consider matters like autonomy, integrity, authenticity, personal safety, individual rights, liberties and dignity and how the company can best incorporate these into its functioning, development process, and into products/services themselves. Bearing in mind these principles helps to set and maintain a responsible profile what is valued not only by the end-users and regulators but potentially can support getting external (public) funding. Analysis made by SSH experts can help to understand whether the above-mentioned core principles are met in own R&I process.

5. Reflecting on the purposes of a given product or service

Reflecting on the purposes of (developing) a given technology can help to make the company's vision clearer and more obvious. Thinking about the reasoning of developing a certain technology, and its benefits for the developer and society, is part of this reflection. In this case, the role of the SSH is to bring an external perspective on the product/service and improve the knowledge on the context where the product/service will be placed, helping the questioning process whether the technology output fits into this context. When proceeding like this, possible limits, unexpected side-effects or potential threats arising from the product/service launching might be revealed.

6. Thinking of possibilities and potential risks

As usual, unforeseen happenings might occur during the R&I process in ICT. This is why it is always good to try to predict those and have risk and crises management plans how to overcome them in the less hurting way possible. Ideally, the plans developed in advance should consider a couple of principles and be as responsible as possible, in any case not compromising ethical, social and environmental aspects. Mapping the uncertainties, to be well prepared for different or opposite situations then expected in first place, is again a task fitting SSH experts.

7. Being transparent

The impression end-users and other actors (will) have regarding the product or service of an ICT company very much depends on the transparency policy of the company, in terms

of the process of development, innovative results, and product/service positioning. Telling the story of the product or service has proven to be a very up-to-date way of communicating with the target audience, as it has got something “tangible” to relate with. Relations with the customers are created this way and a mutual understanding is being built in order to have a channel where also the impact of the ICT innovations can be communicated towards the target audience.

8. Hearing from different stakeholders

The innovation process should also be backed by participatory consultancy with different actors in order to get feedback on the product or service before launched on the market. Such feedback can give new perspectives and even change the course of actions taken, all in all having a positive effect on the final product or service, based on the true need and desires of the society. SSH experts can be a good go-between to get this feedback, using many useful methods, e.g. focus groups and user journeys, and having the right competencies to interpret this into valuable inputs for product/service improvement.

9. Testing the products on the users

It might be useful to test the product or service of a company on the potential future end-users. This can again be a well of new ideas on how to improve the product or service. This way the society's demands are proven, and if not, there is still place for update before the real launch. Specific requirements can be well translated by SSH experts, what directly contributes to the following improvement of the end product.

10. Reviewing own innovation process

As the world we live in is changing permanently, trends can also change fast. This is especially true for the world of digital technologies. Therefore, the R&I in ICT should be seen as a process of permanent development, where any innovation developed has to be adjusted constantly. Whether these adjustments go hand in hand with the demands of the society can be revealed again by SSH experts.

All the above listed and described tips are thought to support wider and more quality RRI via co-creation processes of two communities, the ICT and SSH communities, in digital technology development in line with the demands of the society. They serve as a good example how to bring more responsibility to the process and also shows how this process can be beneficial not “only” for the society but also for the companies themselves.

## **2.5. Good practices in applying RRI aspects in ICT research and innovation in Slovakia**

Being aware of the fact that the concept of RRI is rather new, instead of a thorough analyses of the whole ICT sector, we only present a few good examples of ICT companies or projects operating in Slovakia and fulfilling (some) dimensions of the RRI concept. Some of these entities are well aware of their compliance with the RRI concept, others rely on their real-world experience and high level of social and environmental responsibility and consciousness, not explicitly referring to the RRI as a concept. Certainly, one of the good examples of an innovative digital technology solution for a more quality life in cities but not solely, is the Interactive tool for Urban Development (ITUD). ITUD is a unique tool which has linked the latest interactive technologies, virtual reality, handheld analytics, and physical model analytics. Thanks to its intuitive work environment, it is possible to communicate with a sketch and a physical model, what also makes this tool capable to connect to the existing workflow instantly. One can create a 3D virtual model without a computer, while analysing and simulating are ongoing. Anyone can be involved in the creative process of developing and/or consulting visions and ideas. ITUD combines manual sketches, physical work models and virtual models with ongoing mathematical analysis. ITUD can analyse sunshine, wind flow, or urban economics, assess compliance with a land-use plan or convert population of a certain living

space. Thanks to objective analysis delivered by the tool, arguments for an open discussion are provided. As a matter of fact, ITUD is capable to provide direct feedback in form of simulations or analyses in the initial stages of design and planning. Based on the nature of this tool, its users are greatly encouraged to look for more variants, therefore raising the chance to pick the solution suitable for most of the involved parties ([www.itud.sk](http://www.itud.sk)).



Figure 1: ITUD (<https://zurnal.pravda.sk/>)

Another example, *Sensoneo Sensors and Intelligent Software*, “provides smart enterprise-grade waste management solutions for cities and businesses to cost-efficiently manage the waste lifecycle and improve the environment and well-being of people. Through its unique smart waste management technology, Sensoneo is redefining the way waste is managed.” This sophisticated solution, a cloud-based platform, combines special ultrasonic smart sensors that monitor waste in real time using IoT or GSM, offering cities and businesses a factual and data-driven decision-making possibility, by optimizing waste collection routes, frequencies and vehicle loads, resulting in cost reduction by a minimum of 1/3 and carbon emission reduction in cities up to 2/3 ([www.sensoneo.com](http://www.sensoneo.com)).

*Figure following on the next page*

**Smart Waste Management System**

The powerful cloud-based platform enables the customer to configure, monitor and manage daily waste management. In addition to real-time waste monitoring, the tool can also plan the optimal collection routes and semi-automate navigation. The solution is hosted in MS Azure cloud.

**Remote management**  
Manage waste remotely via mobile apps for operator, driver and citizen.

**Containers Table:**

Type	Status	Stand	Street	Type	Volume (m3)	Last measurement	Predict
98%	✓	51181	Cajkovskah 20	98%	✓	C05086 glass 1.23	4.4.2018 Full
94%	✓	52012	Oblat 36	94%	✓	C05197 glass 1.23	4.4.2018 Full
93%	✓	53028	Jurkovicova 1	93%	✓	C002881 glass 1.23	4.4.2018 Full
92%	✓	51819	Potarnikova 7	92%	✓	C05171 glass 1.23	4.4.2018 Full
91%	✓	52007	Na Mleku 20 (25)	91%	✓	C06071 glass 1.23	4.4.2018 Full
91%	✓	53010	Cajkovskah 45 (Medicinska centum)	91%	✓	C00101 glass 1.23	4.4.2018 Full
90%	✓	52147	Motmil 42	90%	✓	C21471 glass 1.23	4.4.2018 Full
90%	✓	53004	Novosadskah 110	90%	✓	C00041 glass 1.23	4.4.2018 Full

Figure 2: Sensoneo ([www.sensoneo.com](http://www.sensoneo.com))

Another example is the NEWTON project. As officially stated: “NEWTON project has developed innovative technology enhanced learning methods and tools to create and interconnect existing state-of-the art teaching labs to build a pan-European learning network platform that supports fast dissemination of learning content to a wide audience in a ubiquitous manner. NEWTON focuses on employing novel technologies in order to increase learner quality of experience, improve learning process and increase learning outcome.” In more details, multisensorial media distribution of content has been developed together with new teaching methodologies including augmented reality, gamification and self-directed learning, all this supporting also learners with physical disabilities. Generally, the platform impact should be materialized in form of user satisfaction, improvement of the learning and teaching experience, all this by using a digital technology solution and its content ([www.newtonproject.eu](http://www.newtonproject.eu)).

**EU HORIZON 2020 Project newton**  
Networked labs for training in sciences and technologies

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youtube.com/NewtonProjectH2020

**Virtual Labs**  
**Far Labs**  
**Adaptive Personalized Learning**  
**Augmented Reality & Virtual Reality**  
**Multimedia**

[www.newtonproject.eu](http://www.newtonproject.eu)

Figure 3: NEWTON project ([www.newtonproject.eu](http://www.newtonproject.eu))

Last but not least, HubIT<sup>5</sup> Metropolis, a platform serving as a tool for both the communities – ICT and SSH – to get together, start the co-creation and cooperation process, and making ICT innovations closer to social challenges and needs, has been developed as a joint initiative of 10 countries, Slovakia being one of them. It fosters a more sustainable and responsible approach to ICT research and innovation, providing a set of resources to make this happen. A list of key ICT challenges is listed on the platform, the ecosystem and existing good practices mapped, guidelines and self-assessment tools provided, together with fact sheets, policy briefs and with a social dashboard, supporting joint initiatives for future calls and other RRI-related activities, to increase the cooperation among its ICT and SSH background users. ([www.hubit-project.eu](http://www.hubit-project.eu))

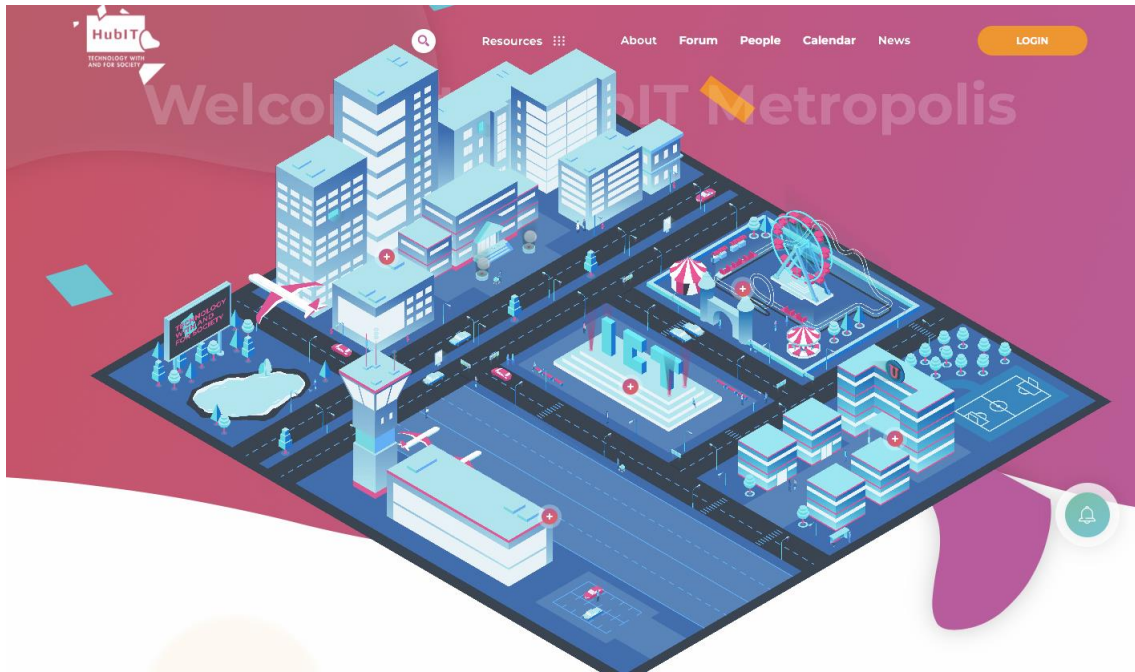


Figure 4: HubIT Metropolis ([www.hubit-project.eu](http://www.hubit-project.eu))

### 3. CONSLUTION

ICT is a growing field, assuring new and exciting technologies for societies are there to come. Life without ICT would never be the same again. However, the pressure on this sector in terms of ensuring that societal needs are kept in mind, both related to research and innovation, is growing. The role of social sciences and humanities in this context is very crucial and cross-sectorial and even non-disciplinary cooperation has been becoming more and more common, especially in the academic sphere. Certainly, the profit-oriented entities need to identify their own motivation factors for implementing RRI: SSH can e.g. help to “sell the responsibility” of a company and use it as a well-functioning marketing tool. There are fall-backs in complying with RRI in ICT, on the other hand a few good practice examples can be found and used as an inspiration.

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## ENTERPRISE IN TURBULENT ENVIRONMENT: CORPORATE GOVERNANCE (CORPORATE EFFICIENCY-LEGAL ASPECTS)

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### ABSTRACT

*The definition of corporative governance relies on idea of governance. Firstly, the accent was on performing of power and, nowadays, its meaning is totality of activities, not only giving orders, commanding, forcing. Nowadays, the corporative governance has different aspects: economic aspect, knowledge management aspect, marketing aspect, human resouse (HR) aspect. The economic aspect is the most present aspect in contemporary researches. What is visible at the first sight is that corporative governance is always the question of its efficiency. In complex reality, the question of efficiency of governing of social reality arises and the science is to supply us with efficient technical solutions - the starting point is theoretical definition of the idea of efficiency, as well as the possibility of its implementation in one social and legal system. Making difference between the principle of efficiency and, at the other hand, the principle of rationalisation and economic principle, is needed, as well as the difference between the principle of the efficiency and the principle of legality. Due to the state intervention into private business area by its legislation, sometimes prevails the principle of legality, rather than strong request for efficiency.*

**Keywords:** *idea of governing, idea of efficiency, economic aspect of efficiency, the principle of legality, state intervention*

### 1. INTRODUCTION

The definition of corporative governance relies on idea of governance (governing) as a “totality of activities” by which corporation directly executes [...] “its everyday work and tasks”. Research of idea of governing was firstly connected with state governing (XIX century), with the accent on authority (“performing the power”) like “giving orders, commanding, forcing”. Then, the accent was tranferred to totality of activities concerning the execution of tasks. [Dimitrijevic P., 1983:14] In relation to corporative governance there are also, even nowadays, the approaches relying to above explained authority model of governing, took over frome state governing. The ratio of such approaches is that there are, even nowadays, two systems of regulation of social relationships: heteronomous (state regulations) and autonomous (private subject regulations). [Kulic Z., 2015:38] Even the process of deregulation is nowadays obvious, the encrease of state regulations is noticable as well, making creation of regulations a contradictory operation in neoliberal societies, especially in some areas, like IT sector, technology, energy corporations etc. That is why the idea of governing nowadays is more complex than it was in XIX cenury (the prevailing authority aspect of governing).

### 2. DIFFERENT ASPECTS OF CORPORATIVE GOVERNANCE

Nowdays, the corporative governance has different aspects: economic aspect, knowledge management aspect, marketing aspect, human resouse (HR) aspect.

- **Economic aspect**

The economic aspect is the most present aspect in contemporary researches. Such an importance of economic aspect is initiated by “global processes” like “process of technological development, production and distribution of energy, IT industry...” [...],

where the huge economic power is concentrated, generating all other impacts. [Radovanovic S., 2017:183] Economic aspect of corporative governance puts a special accent on structure of share holders (small shareholders, big shareholders, domestic shareholders, foreign shareholders). The researches in Europe show that “(i) larger firms are less efficient than smaller firms, (ii) greater leverage contributes to corporate efficiency, and (iii) high competition is less constructive to efficiency than moderate or low competition” [...] “(iv) efficiency increases when majority must deal with minority shareholders and (v) domestic majority owners improve efficiency more than foreign majority owners when no minority shareholders are present, but (vi) the opposite is true when minority shareholders hold a substantial fraction of the firm’s equity.” [Hanousek J., Kocenda E., Shamshur A., 2015:24] In relation to this the transition economies are characterised with “devaluing public enterprises, selling them for a pittance and deceiving small shareholders massively...” [Njegovan Ratkovic B., Stamenkovic S., 2016: 228]

- Knowledge management aspect

Besides economic aspect, corporative governance is focused on knowledge management and usage of different kinds of knowledges. In that sense, almost general attitude is the focus on CMS (Content Management System) or the software in Web Content Management. [Hasanovic F., Stojanovic Z. , 2017:355] However, there must be underlined that contemporary usage of knowledge is much more complex than usage of software information (so called explicit knowledge) and the usage of experience must be included (tacit knowledge). Such a combination of both explicit and tacit knowledge in the most skillful way is used by educational management, with noticeable tendencies to be widened to other corporative scopes of work. [Radovanovic S., 2018:3,4]

- Marketing

Corporative governance is related to usage of marketing services. The first step, and, for a lot of corporations, being the last step, also, is corporative “entrance” at internet presentation and up to date of company web site, and only some of the companies has universal request (exp. World Press platform). [Hasanovic F., Stojanovic Z. , 2017:356, 357]

- Human resource (HR)

The increasing global complexity environment in which corporation is performing its activity changes the corporative attitude to HR, especially in the above mentioned fields: IT, energy, technology... “Namely, the requests of huge corporations in above activities are focused to engagement of highly educated and highly specialized personnel, experts, and expert teams, offering high specialised knowledges, what list is being daily widened and developed by them. There are also the new forms of engagements, project engagements, out of corporative premises work, work at home etc.” [...] However, professional specialisation and professional education “does not afford guarantee for the highest level of efficiency” [...] “due to their alienation from the interests of those who has engaged technocrats...” [Radovanovic S., 2017:183] This danger of bureaucracy (“forth power”) [Radovanovic S., 2018:51] generates the need not only objective (material) conditions to be fulfilled but subjective ones as well (moral, loyalty, responsibility), and elimination of the habit to engage, especially in reach counties, personnel being educated in famous schools and universities. [Radovanovic S., 2018:50,53,55]

Exposed researches show what is firstly visible as a result of each corporative governance research – corporative governance is, at the end of the day, always the question of its efficiency. That is the reason for theoretical definition of the idea of efficiency as a starting point of each research of corporative governance.

### 3. THE LEGAL IDEA OF EFFICIENCY

Contemporary social life has an extraordinary complexity as a main characteristic, caused by global technology development. Such a complexity causes even greater entropy and numerous crises. Such phenomena ask moving of focus of analysis from society as an introverted system to reality being “complexity of the world” [Pecujlic M., 1982:58], meaning the relation of society and external environment. “Cut and control of the external world need functions to be multiplied, to be more and more complex, their ability to accommodate and to change.” [Pecujlic M., 1982:59] The aim is to specify what influences of the external world to allow to enter or not to allow. The multiplication of the functions forms the variety of subsystems, but it is clear to everyone that they cannot equally take part in governing of the social reality. This is where the question of efficiency of the governing of social reality arises, and science as an important subsystem gets the advantage in theoretical examinations. The science is to supply us with “efficient technical solutions” [Pecujlic M., 1982:59]. The request for efficiency asks the improved theoretical definition of the idea of efficiency as well as the possibility of its implementation in one social and legal system. Concerning above mentioned, the starting point is economic efficiency for B. Horvat [Horvat B., 1979:41]. If the efficiency could be comprehend as the best possible usage of the available resources, and if “the best” refers to economic welfare, this is when we can speak about economic efficiency. From such a point of view the efficient governing needs some financial conditions as well as technical-technological equipment (as above mentioned task of science) in close relation to professional human resource. What the administrative law science precised as a starting point is definition of governing as a “direct performance of the tasks of governing”. [Krbek I., 1960:21] In relation to this is “the organization activity” [Krbek I., 1960:22] and idea of management “giving the orders and performing supervision of its execution” [Krbek I., 1960:21]. Universally, efficiency is “the quantity resultant of invested and realised, taking special care of subjective and objective (material) elements and factors as well as other resources (exp. energy), time, prices, volume, etc., and of quality of results as well.” [Lilic S., 1983:303] Such an idea of efficiency refers to speciality of each legal system, being the unity of two spheres: normative and factual. Thus, the implementation of law is “transformation of law into reality, its realisation.” [Lukic R., 1983:221] Due to such a characteristic, the principle of efficiency becomes inevitable for regular function and implementation, more and more, in domain of law as well as in other spheres of social life. This is why, in domain of law, firstly in administrative law, there are daily requests for “decentralisation of public functions”. [...] The expression of such requests, based on separation of powers as well as the idea of liberalism, is: “the state would not take over too much tasks” [Krbek I., 1960:33, 36]. Owing to such an idea, the principle of efficiency is included in content of numerous modern constitutions. As an example we can recall par.137 of the Constitution of Republic of Serbia on 2006, where the principle of efficiency is emphasised in relation to realisation of citizens’s rights and obligations and their needs, and, therefore, even transferring of public authorisation to local administration is possible. Besides, making difference between the principle of efficiency and, on the other hand, the principle of rationalisation and economic principle, is needed as well: rationalisation comprehended as “element of working process, without all unnecessary operations, which affords achieving the results with a certain quality” and economic means [...] «the common characteristic of work, performed with the least usage of time and means (including energy), being necessary for achieving the expected results” [Dimitrijevic P., 1983:222]. As every other principle, the principle of efficiency is not absolute principle, without limitations. Notwithstanding increasing requests for efficiency, based on complexity of life and problems, asked to be solved, every responsible legal system has explicit provisions of limitations of principle of efficiency. These limitations are general principles like the rule of law, constitutional and principle of legality, or, as to I. Krbek, “Legal aspect of administration has its strongest expression in principle of

administration legality” [...] and “Owing to principle of legality, the social system realised by administration becomes legal system (there is no legal system if administration acts arbitrary).” [Krbek I., 1960:170] However, some of the opinions deny principle of legality to be limitation of the principle of efficiency. Such an approach appears in researches of “mutual relation and correlation of principle of legality and principle of efficiency in performing administrative function and work of administrative organs generally speaking”. [Lilic S., 1983:302] This opinion does not deny the principle of legality as a “frame for performance of administrative function and work of administrative organs” [Lilic S., 1983:302] but emphasises its other characteristic of enabling “internal harmony” [...] between “normative and factual» thou, [...] “just a system in which there is a functional integration between normative and factual could be considered as legal system”. [Lilic S., 1983:303] The main result of such an approach is the conclusion that every breach of principle of efficiency in work of administrative organs and performance of administrative function is the breach of the principle of legality at the same time. However, legal theory as well as the contemporary life conditions do not allow equality of principle of efficiency and principle of legality. Namely, modern states make more and more regulations due to complexity of different spheres of social life, producing crowding of statutes (laws). I. Krbek finds two moments important for crowding of statutes: “firstly, the state gets widen its scope of work a great deal, and, second, principle of legality asks precise regulation”. [Krbek I., 1960:151] Thou, principle of legality has its autochthonous requests, very often even opposite to requests of principle of efficiency. Thou, principle of legality asks the codification of administrative law but legal practice showed different tendencies “because non codifying is part of administrative legal nature, and not only , or not exclusively, part of technically not regulated administrative legal origins”. [Krbek I., 1960:128] At the other hand, the neoliberal and welfare state concepts are followed with state intervention justified by the aim of “protection of economic requests and fulfilment of general needs”. [Radovanovic S., 2017:444] Even constitutional protection, in contemporary constitutions, of concept of free market and free economy asks for protection of principle of legality and rule of law principle. And even principle of legality is necessarily related to the need for higher level of quality of regulations, having in mind especially technological development and ecological and general safety requests. [Radovanovic S., 2017:445] Even the process of “open administration”, arising from requests for efficiency, asks for the legal protection of rights of citizens and consumers. [Radovanovic S., 2017:446] Therefore, the principle of legality appears as a supplement to requests for efficiency, and, by no means, equality of principle of legality and principle of efficiency.

#### 4. CONCLUSION

Corporate efficiency depends on legality of its business. The damage which could be produced by irregular corporate business may annulate all the benefits and good results, all material means, money investments, subjective conditions. Besides, corporate legality of business means that corporation must implement not only heteronomous (state regulations: laws, directions) but autonomous (its own) regulations as well, like statutory acts, codexes etc. In some areas, like IT, production of food, energy, these heteronomous regulations are, very often, based on public authorisation for issuing them. Corporate efficiency is not the only aspect of corporate business legality. All other aspects of corporate governance must be in accordance with the request for legality, thou, the principle of legality is their frame of work. As there is not equality between the principle of efficiency and the principle of legality, corporate governance means taking care of implementation of both principles at the same time. Due to state intervention into private business area, by its legislative, sometimes prevails legal requests, no matter what is the idea of corporate governing and corporate efficiency.

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# SUPPLY CHAIN VALUE CREATION: AN ANALYSIS OF POLICY, INFRASTRUCTURE AND MARKET IN CURRENT E.U. ENVIRONMENT

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## **ABSTRACT**

*The present paper aims to analyse the impact of logistics policies, state of infrastructure and current market status in the European Union on supply chain value creation. Starting from a comprehensive literature investigation that includes both views of policymakers and most recent research in the supply chain field, the author constructs a framework to encompass how conditions related to regulation, infrastructure and market are reflected in the supply chain. In order to assess value creation, the author considers a closed-loop approach to reflect a wide array of processes, technology and strategies that bring added value for stakeholders from the starting point in manufacturing to the end point of return and customer service. European Union's logistics policies comprised in this paper aim to reflect the impact on both the company and the customer, as we aim to integrate both stakeholders' views in our assessment of value creation. The analysis on infrastructure considers on one hand the implication of investment in transport infrastructure and on the other hand the current status of resources engaged. For our analysis of infrastructure's stake in value creation, we include both a human resources perspective and a technological one. Our market analysis attempts to generate a snapshot of the current conditions in which companies compete, under the assumption that the order winner criteria is drawn from the supply chain. By using statistical data from official European Union channels and case studies of companies notoriously successful for their performant supply chains, we conclude our case study with an engaging and up to date review of the current environment. The contribution of our study consists in bringing together several aspects of policy, infrastructure and market environment that are generally considered as stand-alone points in business strategy creation.*

**Keywords:** *Business Strategy, Policy, Supply Chain*

## **1. INTRODUCTION**

In the current time of the fourth industrial revolution, also known as Industry 4.0, the challenges for businesses are manifold and continue to change rapidly. It is highlighted nowadays through research and practice that only those enterprises that manage to be agile and keep up with the trends are staying at the top of the market. In this environment, the challenges related to policy, infrastructure and market conditions represent the areas in Supply Chain (SC) that exert most influence on value creation. In the present paper we aim to take these logistics-related aspects into account in order to create a framework that supports policymakers, practitioners and academics in their contribution to value creation in the SC. The World Bank (2018) has defined logistics as ‘a network of services that support the physical movement of goods, trade across borders and commerce between borders’ that ‘comprises an array of activities beyond transportation, including warehousing, brokerage, express delivery, terminal operations, and related data and information management’. While underlining the vital significance of performant logistics for developing countries, which compete in the global market, the organization’s 2018 report outlines that logistics policies have transitioned from the singular focus of ‘facilitating trade and removing border bottlenecks’ to more complex issues that require regulation and investment.

Among the most recent trending topics we can enumerate from the report are spatial planning, availability of resources for training, sustainability in terms of environmental, social and economic aspects and the SC resilience to disruption. The motivation for approaching this topic is related to the author's interest in how companies can make sure that their SCs are prepared and updated to the current trends. The change from a lean SC objective to an agile one has left many enterprises in a position where they struggle to meet customers' expectations and have difficulty to do so in a profitable manner. We consider this paper to be the building block of a next research that will employ empirical data in order to assess and discuss how several factors impact the company's objectives – financial, social, environmental or qualitative. The paper consists of a literature review that outlines most recent outputs of policymakers and findings of researchers, followed by a case study section in which the author presents and explains the proposed framework for value creation. The paper concludes with a summary of the ideas presented and a proposal of future directions for research.

## 2. LITERATURE REVIEW

The purpose of the literature review section is to outline EU policies and projects affecting SC transformation, Industry 4.0 trends and their manifestation across EU member states and the status of logistics performance that creates the market conditions in which companies and individuals operate. The Supply Chain Operations Reference Model (SCOR) proposed by the Supply Chain Council (2017) describes the full supply chain of a business' activities, with five key management processes: plan, source, make, deliver and return. Therefore, the task of encompassing all SC areas when discussing legislation, infrastructure and market conditions is a rather complex one, as they include information management, procurement, transportation, warehousing and customer service. EU regulation is a driver for fostering or hindering supply chain value creation, as it can impact both businesses and individuals, in their adjustment and competition in the Industry 4.0 context. As outlined by the World Economic Forum's report (2018) on potential scenarios for the future of work, we can assess that policies can nurture or setback in several fields: workforce, population migration, robots use in industry, replacement of humans with robots in menial industrial tasks, supporting entrepreneurship ventures, education and skills of workforce, access to technology, local and regional production and disruptions due to accelerated changes. EU's efforts in infrastructure are confirmed by several initiatives and policies. Since 1990 the EU has established the 'Trans-European Transport Network' (TEN-T) to support the creation and development of network corridors among member states. Bodewig and Secchi (2018) have compiled a comprehensive report outlining the progress in projects related to infrastructure and the networking in the EU area. Their action plan outlines the progress made since TEN-T implementation and the directions for the future, considering the most recent trends. The authors of this progress report have identified over 3.000 projects aiming at the member states' infrastructure, which will lead to a 750-billion-euro investment by 2030. Connecting Europe Facility (2013) is a regulation set by the EU to ensure timely and sufficient funding is allocated to projects in 'transports, telecommunications and energy infrastructure projects'. Aiming to contribute to economic growth, this regulation impacts member countries in the areas of infrastructure and transport networks, supporting both the modernization in accordance with the latest trends and the elimination of bottlenecks in the interconnected networks of countries. Therefore, the transport sector is provided with most funding out of the 33-billion-euro budget outlined for 2014 to 2020, approximately 80%. The 2018 assessment of results confirms that outlined goals are on track to being attained: transport network enhancement (supported by adjacent EU regulations and projects), environmentally sustainable energy increase and digitalization of the EU market for businesses and individuals. In addition to EU regulations, a significant impact on value creation in the SC is exerted by national policies and governmental efforts in the direction of progress.

In this regard, the Industry 4.0 concept, which originated from Germany in 2011 has spread its perspective across Europe, pushing governments to acknowledge and act in accordance to the expectations for the fourth industrial revolution. Rojko (2017) outlines in her paper that several EU countries have adopted national policies to support emerging trends associated with Industry 4.0. The European Commission's (EC) policy for 'Coordination of European, National and Regional Initiatives' (2018) monitors the efforts of several member states in this direction. In France, 'Industrie du futur' is the foundation for industrial policies, enabling the country's businesses and customers to interact in a regulated environment, facilitated for the new expectations. In Italy, 'Industria 4.0' constitutes a national plan targeting to support businesses and individuals in their preparedness for the new market conditions. On one hand, companies are supported in their efforts for having the technology and employee resources to maintain competitiveness in the EU market. On the other hand, individuals are supported in acquiring the skills necessary for employment in the transformed work environments as well as in their customer quality to purchase in an environment transformed by the digitalization. In Hungary, 'IPAR 4.0 National Technology Platform' focuses first and foremost on the manufacturing capabilities, which is in line with the assumption that developing countries must be strongly supported in order to keep up with developed countries. A major gap between developing and developed countries in the SC loop, from the point of manufacturing to the point of return, would affect all stakeholders. Other countries monitored by the EC, that have issued policies to foster the development of industrial emerging trends, are Austria, Belgium, Czech Republic, Denmark, Spain, Lithuania, Luxembourg, Netherlands, Poland, Portugal and Sweden. The World Bank has issued periodically, since 2007, the report titled "Connecting to Compete" that comprises an empirical assessment of what has become a widespread benchmarking tool for researchers, policymakers and professionals – the Logistics Performance Index (LPI). Numerous studies, several of which quoted in this paper, have employed the report, more precisely the LPI, as an indicator for logistics performance topics. In this regards, the LPI has been employed as a source to link logistics performance to financial performance, sustainability and innovation. The tool comprises an international LPI and a domestic LPI. The international LPI from the 2018 report ranks 160 countries on six performance indicators summarized, according to the World Bank published methodology (Appendix 5, 2014), as follows:

- 'Efficiency of customs and border management clearance;
- Quality of trade and transport related infrastructure;
- Ease of arranging competitively priced international shipments;
- Competence and quality of logistics services;
- Ability to track and trace consignments;
- Frequency with which shipments reach consignees within scheduled or expected delivery time.'

According to the World Bank's LPI report from 2018, these six components can be divided into input and output-related components, as displayed in Figure 1. On one hand, we have the customs set-up, the infrastructure and quality of services that are inputs for SC services. On the other hand, timeliness, international shipments capabilities and platforms for track and trace of shipments are outputs of services whose outcome related to time, cost and reliability are measures for assessing performance. Both inputs and outputs demand attention from all stakeholders – policymakers and practitioners both – in order to ensure the achievement of objectives and a sustainable growth.

*Figure following on the next page*

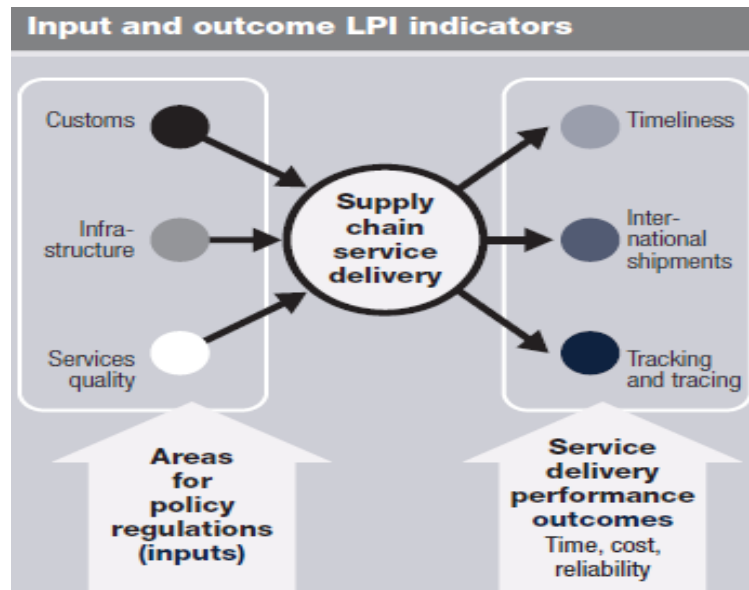


Figure 1: Input and Outcome LPI indicators (source: World Bank LPI Report, 2018, p.8)

The domestic LPI from the 2018 report is based on answers collected from logistics professionals from 100 countries, performance being measured through the following components (Appendix 5, 2014): Infrastructure, services, border procedures and time and supply chain reliability. In our paper we consider the international perspective of the LPI index, altogether with the perspective of European Union regulation and the emerging trends in the European market conditions. Therefore, based on the information gathered from the literature review, we further put together a framework for value creation that treats the three segments – policy, infrastructure and market conditions – in an aggregated manner. Gani (2017) has analysed the impact of logistics performance on international trade based on results for import and export and the indicators from the LPI. His empirical study considers 60 countries from all continents for a four-year period. While demonstrating an overall positive correlation between logistics performance and trade results, the author acknowledges that the limitations of the study are the scarce data, which is not an annual collection for the time period, and the rather limited power of the indicators to reflect in trade. The empirical research of Cemberci, Civelek and Canbolat (2015) have demonstrated significant impact of Global Competitiveness Index (GCI) on three dimensions of LPI, namely ‘international transportation, tracking and tracing and timeliness’. Linking GCI with logistics performance is an important empirical result, that can support policymakers in their efforts for economic growth supported by supply chain value creation.

### 3. FRAMEWORK FOR VALUE CREATION

The design of our framework approaches three areas of interest identified throughout literature as major drivers for change in SC value creation. Before outlining our take on strategy based on policy, infrastructure and market conditions, we have to explain what we understand through value creation. As our study is not an empirical one, but merely opening the opportunity for one, we will take the theoretical assumptions for value creation as expressed throughout literature by policymakers, businesses and academic research. Value creation in our framework is reflected through processes, technology and strategy in the SC. We link process with policy as we consider that regulation affects how processes are rolled out at a country, business and individual level. Technology is linked with infrastructure as it is the prerequisite for being up to date with the market requirements. Last but not least, we relate strategy to market conditions since the approaches of policymakers, companies and individuals are influenced by the

environment in which they act. Considering the World Bank LPI report from 2018, we reconfirm that the requirements are different considering the policy, infrastructure and environment in which a SC operates. Therefore, the contribution to value creation of the six components of international LPI vary from country to country. We can notice in Figure 2 that the components score, while maintaining the order of importance, varies among the five quintiles of countries assessed. We can notice that in developed countries, timeliness, tracking and tracing, quality and infrastructure have high scores as the expectations in these areas are more easily met due to market conditions and infrastructure. However, the lower levels for ease of shipping and customs can be improved and can only be done so in direct relation to partner countries, most likely in lower quintiles, that hinder advancements in these areas. At the other end, there is the bottom quintile, in which there are the same core issues with bottlenecks in international shipments and border access. Also, the other components register lower scores displaying a low quality of logistics services for businesses and individuals.



Figure 2: LPI components score, by quintile (source: World Bank LPI Report, 2018, p.14)

The author proposes a framework for supply chain value creation that maps a proposed set of inputs and outputs, creating a checklist for the use of regulators, practitioners and researchers. As previously discussed, and displayed in Figure 3, we connect policy with process, infrastructure with technology and market condition with strategy. It is important to acknowledge that in the present emergence of the fourth industrial revolution, also known as Industry 4.0, policy, infrastructure and market conditions are key for being an agile adaptor. This applies to policymakers, enterprises and individuals altogether since the changes inflicted by the Industry 4.0 will lead to changes in their roles, responsibilities and approaches.

*Figure following on the next page*

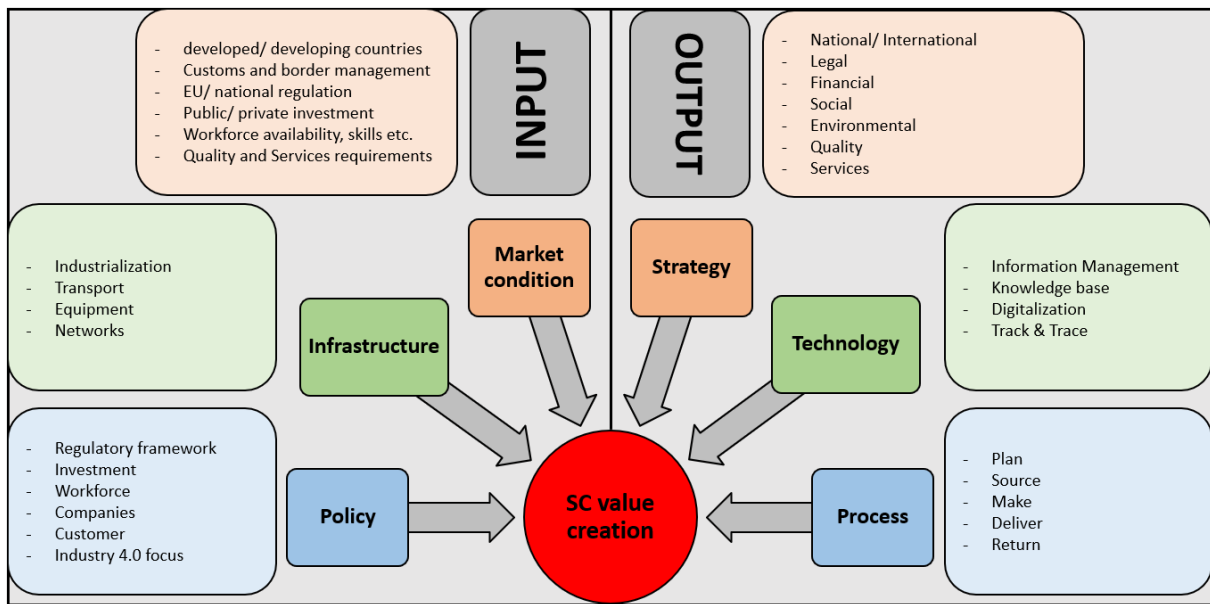


Figure 3: Framework for Supply Chain Value Creation (source: author's design)

Starting from policy, the author proposes as key inputs for value creation: the regulatory framework, investment, workforce, companies, customers and the Industry 4.0 focus. Output has been expressed in our framework through components of the SCOR model, as these inputs can reflect on one or more areas of SC management. The regulatory framework, as the most important policy aspect, impacts the entire SC, as the legal boundaries in which a business and individuals operate determine the respective boundaries in which activities take place. Investments from national, regional or international institutions do not only create the environment for the SC to operate in, but also determine the standards at which each of the 5 areas must operate in order to be positioned in the market. The enterprise, the workforce and the customers set their expectations for activities in the SC. These stakeholders regulate their interactions, starting from what the policymakers already have in place, creating value through their inputs for planning, sourcing, producing, delivering and returning processes. To exemplify this first input-output relationship we look at countries that have continuously updated their national policies to include the Industry 4.0 trends, such as Germany, Austria or Netherlands, who are among the top 10 performers in the LPI 2018 classification as indicated in Figure 4. By adopting the EU directives on Industry 4.0 in their national policies, they have ensured EU investments in workforce and enterprises' projects that bring value added from a social, financial, qualitative and environmental point of view.

Economy	2018		2016		2014		2012	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Germany	1	4.20	1	4.23	1	4.12	4	4.03
Sweden	2	4.05	3	4.20	6	3.96	13	3.85
Belgium	3	4.04	6	4.11	3	4.04	7	3.98
Austria	4	4.03	7	4.10	22	3.65	11	3.89
Japan	5	4.03	12	3.97	10	3.91	8	3.93
Netherlands	6	4.02	4	4.19	2	4.05	5	4.02
Singapore	7	4.00	5	4.14	5	4.00	1	4.13
Denmark	8	3.99	17	3.82	17	3.78	6	4.02
United Kingdom	9	3.99	8	4.07	4	4.01	10	3.90
Finland	10	3.97	15	3.92	24	3.62	3	4.05

Figure 4: Top 10 LPI Economies in 2018 (source: World Bank LPI Report, 2018, p.11)

We consider infrastructure to contribute to SC value creation through the process of industrialization, the consolidation of transport infrastructure, the modernization of equipment and the networks created through transport and flows of information. As a result, the output can be generally evaluated through the level of digitalization, the knowledge base, information management and the capacity for track and trace. As reflected in the literature review, the EU is actively investing and monitoring progress in industrialization, transport infrastructure, equipment modernization projects and developing networks among its member states. The ways in which success is measured varies but the value added is generally a global one, meaning that the EU does not target singular benefits or stakeholders, having a big-picture kind of picture. Our framework contains four outputs, that are an attempt to summarize the categories of outputs on which the EU focuses through its policies and investment. Information management is supported not only as a process for supporting the flow of information between the member states but also as a process that aims at collecting data that facilitates the proposals of future policies and investment programs. An example for this aspect is the TEN-T project's development that considers the continuously updated status of infrastructure, thus bringing value added through information management. Both policymakers and practitioners benefit from the information output, being aware of the current status and prepared to accomplish the next steps as proposed by the EU commission. In regards to infrastructure and technology, the example of the bottom 10 countries in the LPI 2018 ranking highlights how the lack of infrastructure leads to poor logistics performance. In these countries enumerated in Figure 5, SC value creation is hindered by the lack of infrastructure, leading to the absence of the technological means that would connect them to developed or developing countries. On the other hand, we acknowledge that the countries in the top 10 are developed countries in which there is no discussion over access to technology. But rather, in these developed countries the discussion is about innovation, knowledge expansion and digitalization.

Economy	2018		2016		2014		2012	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Afghanistan	160	1.95	150	2.14	158	2.07	135	2.30
Angola	159	2.05	139	2.24	112	2.54	138	2.28
Burundi	158	2.06	107	2.51	107	2.57	155	1.61
Niger	157	2.07	100	2.56	130	2.39	87	2.69
Sierra Leone	156	2.08	155	2.03	na	na	150	2.08
Eritrea	155	2.09	144	2.17	156	2.08	147	2.11
Libya	154	2.11	137	2.26	118	2.50	137	2.28
Haiti	153	2.11	159	1.72	144	2.27	153	2.03
Zimbabwe	152	2.12	151	2.08	137	2.34	103	2.55
Central African Republic	151	2.15	na	na	134	2.36	98	2.57

Figure 5: Bottom 10 LPI Economies in 2018 (source: World Bank LPI Report, 2018, p.12)

Market conditions impose the choice of strategy for policymakers, enterprises and individuals. In our proposed framework, we consider as inputs the following: the status as a developed or developing country, customs and border management conditions, the precedence of EU or national regulation, the level of public and private investment, the variables related to workforce and the market requirements for quality and services. The strategy adoption can have a national or international focus and considers the following perspectives: legal, financial, social, environmental, quality and services. The disparities between developed and developing countries, as confirmed also in the LPI 2018 report, are visible in regard to policy and infrastructure and affect all stakeholders. The legal environment can lead to advantages and disadvantages for stakeholders activities, costs or development while financial benefits can differ in these categories of countries for stakeholders, leading to further differences in the

social and environmental policies and actions. Last but not least, the quality of logistics and the level of logistics services have different order-winner levels in developed and developing countries. Reconciliation of EU and national regulation is crucial for the opening of a country in respect to stakeholders, leading to a national or international SC value creation. Partnerships can be forged based on this, as well as based on the customs and border management, that facilitates the roles of businesses, employees and customers. The framework puts together aspects related to policy, infrastructure and market conditions in order to support practitioners and researchers in evaluating their future projects through the lens of value added brought to processes, technology and strategy. This comprehensive approach allows the user to process SC related decisions through a filter that checks for a variety of aspects, thus avoiding the prevalence of one perspective in the detriment of others. Considering how the SC is constantly evolving in terms of processes and technology, the stakeholders have to ensure the right policies are in place, the continuous improvement and update of infrastructure and most importantly, to create a market environment that facilitates the relationship between businesses and individuals.

#### 4. CONCLUSION

To summarize, our paper has gathered the most recent views of policymakers in the European Union and of researchers in the SC field in order to construct a comprehensive framework for value creation in the SC. As a result, we have considered the inputs of policy, infrastructure and market conditions to reflect on the outputs of process, technology and strategy. In the case study section of our paper we have discussed the connections between inputs and outputs at a theoretical level, considering our literature investigation. Our framework proposal reunites three aspects of the modern supply chain that have usually been approached separately in previous researches. As a result, we consider its theoretical importance for policymakers' and practitioners' efforts in business SC strategy creation. The limitations of our paper consist in the fact that we have not approached national legislation, which could have significant impact on the logistics processes within member states' borders. In addition, our paper is purely theoretical meaning that some assessments are either qualitative or assumptions considering previous literature. Our proposal for future research consists of two aspects. On one hand, we aim to consider legislation from both an EU perspective as well as a national one, thus ensuring that we have the best understanding of the regulations' impact on SC processes. On the other hand, we propose to continue the research of value creation in the SC with an empirical analysis that could outline the measurable impact of infrastructure and market conditions on the technological and strategic outputs of enterprises.

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## LEGAL FRAMEWORK IMPACT ACCESSION PROCESS SERBIAN EU ON LOCAL GOVERNMENT IN EMPLOYMENT

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### **ABSTRACT**

*This paper focuses on the analysis of the legal framework, the impact of the European integration process at the local self-government in Serbia in the field of employment, their capacities and capabilities to participate actively in the implementation of European legislation in this area, which have already been transposed into national legislation and the acquis which will become part of the legal system of Serbia at the stage of its accession to the EU. It aims to draw attention to existing and capacity gaps with which local governments have in managing employment policy, with which they can effectively respond to the demands placed on them by joining the EU, as well as the steps you must take to successfully advocated their interests in this process. All this is especially important if one takes into account the fact that much of the legislation and regulations (more than half) in the field of employment in EU member states implemented at the local level.*

**Keywords:** *employment policy, local government, European integration*

### **1. INTRODUCTION**

Deindustrialization encouraged the process of transition and privatization and lack of investment in the real sector caused a general decline in employment and increase the pressure on the labor market, particularly in the less developed regions that have traditionally relied on manufacturing industries and less skilled workforce. It has in the past lead to an even greater difference between the region of the deepening and local governments, as well as their capacity to conduct active labor quite different. The challenges and demands placed upon local governments in the process of European integration, include the establishment of appropriate capacity to allow greater decentralization of the management system in the field of employment. The ability of local governments to respond to these challenges and demands, will greatly improve the ability to opt of Quality of life and standards of the local community, especially now unemployed. Serbia faces major challenges in the process of harmonization of legislation in the field of employment with the EU regulations.

She is signing the Stabilization and Association Agreement with the EU assumed the obligation to harmonize national legislation in this area and with the EU *acquis* (*Acquis Communautaire*), as well as the application. Local governments play an important role in the European integration process, both in terms of the application of standards and values enshrined in the EU *acquis* as well as regarding the preparation and implementation of projects in the field of employment financed by the EU, as well as in terms of informing citizens, especially users of social welfare and unemployment, what they can expect in the integration process and after EU accession.

## **2. COMPLIANCE REGULATIONS IN THE FIELD OF EMPLOYMENT**

Overall, in terms of globalization, information technology, changes in work organization and the increasing flexibility of employment and work opportunities, a growing number of employees are hired on the basis of non-standard employment contract (and less full-time, indefinitely), which resulted in an increased need to provide adequate protection to these categories of employees and in EU law. This was achieved revision of the Directive. 94/104 on working time, adoption of the Directive. 2003/88, concluding European framework of collective labor agreements with part-time and on telework, as well as rules on the prevention of less favorable treatment of workers with part-time and workers employed part-time, all of which should be taken into account when harmonization of domestic labor legislation. Creation and implementation of employment policy in Serbia is the responsibility of the competent Ministry in charge, while the holders Affairs Employment National Employment Service (as a public service) and employment agencies (which are in the legal system of the Republic of Serbia introduced by law in 2003). National Employment Strategy for the period 2011-2020. years in the context of the guidelines and recommendations of the European 2020 strategy for growth and development and strategic orientation of further construction and development of Serbia, as the main policy objective of employment was found to be in Serbia until the end of 2020, establish an efficient, stable and sustainable trend of growth in employment and that employment and labor market institutions fully comply with the *acquis*. Employment policy priorities for achieving the main goals are to increase employment, investment in human capital and social inclusion. Law on Employment and Unemployment Insurance provides for the creation of action plans on an annual basis and their adoption by 31 July of the current year for the next. The competent authority of the local government may adopt its own action plan for employment. The law created the possibility of co-financing of programs and measures provided for local employment action plans, funds from the budget of Serbia. At the local level, coordination of relevant policies in the field of employment shall be based on the Law on Local Self-Government, which governs relations between the authorities of the Republic, territorial autonomy and authority of local governments, as well as cooperation and association of local governments. Law on Employment and Unemployment Insurance, the purpose of the decentralization of employment policy, maintained the possibility of establishing a council for employment in the territory of the Republic, the territory of the province and one or more municipalities (local council). Councils are advisory bodies that provide opinions and recommendations on the issues of interest for the promotion of employment, such as employment plans, programs and measures of active employment policy, regulations in the field of employment and more. If the EU member states find it difficult to reach the goals set by Agenda 'Europe 2020' Serbia will have a more difficult and ambitious task to achieve convergence with them by reducing the differences in employment rates. Specifically, the difference in key indicators of the labor market between Serbia and the EU, especially in the employment rate of working age population is so pronounced that it is one of the most substantial obstacle to fulfilling the criteria for accession. For convergence towards the goals set by the "Europe 2020" will be necessary to achieve faster average annual economic growth of the EU average, while simultaneously the same or greater labor intensity of growth.

Therefore, we should make further efforts to ensure a better focus and greater efficiency of labor market measures and formulated a strategic approach to employment, especially in a situation of limited financial resources, increasing unemployment and deteriorating economic growth. Serbia has no social fund that would be equivalent to the European Social Fund. Preparations in this area can only take place, the ministry was reorganized sector for employment and provide intensive training for all employees. Local government, which has adequate capacity for development and implementation of practical employment policy, which has a high degree of autonomy, that is effective, and up to date close to the citizen is one of the key holders European integration and the performance factor of the process. Her active involvement and participation in this process includes access to various EU funds and partnership through various programs of cooperation. Success in obtaining and effective use of the opportunities provided by these funds and cooperation programs is one of the factors for balanced and sustainable economic and social development of local communities. It is therefore necessary to meet organizational preconditions, take the appropriate preparatory work at the local level and establish good cooperation with the central government.

### **3. ANALYSIS OF THE CAPACITY OF LOCAL ADMINISTRATION FOR THE APPLICATION AND INTRODUCTION OF NEW JURISDICTION TERMS OF DEMAND EU EMPLOYMENT**

Research generally confirmed by very limited institutional, administrative and financial capacity of the local government for the implementation of existing, or the introduction of new their competence in terms of requirements of the EU regulations in the field of employment. Perhaps there lies the explanation of why the local government in the current process of harmonizing these regulations are not largely been an active participant. Since the capacity of local governments that are missing, as appropriate: qualified staff, infrastructure and the potential lack of funds. Therefore, it is necessary to activities primarily focus on the further development of European integration capacities in local government, by strengthening the essential structure of human resources in the local economic development, project teams, and the like. and improve cooperation mechanisms with all units at the national level in charge of employment and social policy and European integration. A more complete implementation of the standards and values of EU policies through local policy will have an impact in particular on: better organization and more clearly the jurisdiction of local governments, the need for regionalization of institutional infrastructure and the need to implement laws in the same way throughout the territory of Serbia. Analysis of the effects of the introduction of legislation to better contribute to its implementation in five ways: 1. Improve the understanding of the effects of decisions at the national level (analysis); 2. It will increase the efficiency and effectiveness of the state administration at all levels of (rational); 3. Supports merge in multiple policy goals (coordination); 4. Improve the transparency of government at all levels and their willingness to act (consultation); 5. Increases the responsibility of the authorities at all levels to complete inform the community as a whole and its individual parts (responsibility). After EU regulations become part of the internal legal order of Serbia, the question of the ways of their implementation, and the creation of a mechanism to provide or their voluntary compliance and implementation, implementation or enforcement. It is essential for the strategy and employment policy is the development and improvement of human capital. This is one of the priorities defined by the National Employment Strategy where it is estimated that raising the quality of the workforce through education and training and social inclusion of individuals and groups in social exclusion can contribute to local economic and social development. Decentralization of decision-making to improve the management, simpler functional organization with much greater participation of employees in the basic functions, which work directly with clients, proactive attitude in contacting employers and finding vacancies, work on improving the

indicators for measuring performance are challenges that are imposed makers from local employment policies. The process of decentralization of employment policy inevitably seeks to strengthen local government institutions that should have the capacity to create measures of active employment policy and other measures taking into account the characteristics of the local environment to find the necessary financial and other resources to monitor and evaluate the efficiency and effectiveness of the measures implemented, etc. . This includes further work on strengthening the capacity of local governments and greater activation of local social and economic councils and councils for employment through training, seminars and the like. In addition to local social and economic councils, with the possibility of establishing prescribed by the Social and Economic Council, the Law on Employment and Unemployment Insurance, the purpose of the decentralization of employment policy, maintained the possibility of creating and local employment councils. Councils are advisory bodies that provide opinions and recommendations on the issues of interest for the promotion of employment, such as employment plans, programs and measures of active employment policy, regulations in the field of employment and more. The development of partnerships and the promotion of social dialogue is an essential precondition for the successful creation and implementation of employment policy and the achievement of the objectives of the employment strategy. A significant number of institutions and organizations responsible for or interested in activities which may affect the improvement of the situation on the local labor market (the National Employment Service, educational institutions, local authorities, regional development institutions, social partners, donors and advisory agencies). The institutionalization of the social dialogue is a clear obligation that arises from each candidate country for EU membership. It should not be forgotten that one of the sections of the Acquis EU predicts the state in the process of joining the obligation to submit regular annual report on progress in the areas of employment, labor law and occupational safety, development of operational schemes of social security and improvement of the institutional social dialogue which includes participation of partners in the EU accession negotiations. The main priority in the social agenda is certainly a process of harmonization of national legislation with EU legislation, ie adoption and reach of European labor and social standards. Starting from the European social model, the main objectives of social dialogue, in accordance with the "Strategy 2020" was: make the work accessible and cost-effective, sustainable pension system, quality education and basic health services accessible to all and so reduce Taking into account previous experience in the social dialogue can be defined the following recommendations for its better functioning at the local level: 1. It takes constant promotion of social dialogue in the local community through examples of good practice and the involvement of local media, constantly raising the capacity of actors to competently participate in the dialogue, networking with non-governmental organizations and mutual better communication among local and national socio-economic Councils, as well as the strengthening of mutual trust between the actors of social dialogue through the actions of common interest / shared responsibility - tripartite projects. 2. Local governments should fulfill the legal obligation to provide material and technical conditions for the work of local social and economic councils (not just office and computer equipment, but the funds needed for the specific activities of the Council and the work of experts in them). 3. Local Social and Economic Councils who are not registered with the competent ministry, in accordance with the law, should correct registration accordingly, which in most surveyed jurisdictions is never being done). This would allow obtaining the status of a legal person, including the possibility of applying for funding from the funds supporting the approximation to European standards in the field of employment and social policy. 4. Attention should be paid to the content of the social dialogue at the local level, it would have to cover the key issues of local economic development, and all issues within the competence of local government in the areas of employment, rather than wasting energy on some other topics or issues that are not within the competence of local actors.

#### **4. THE ROLE OF LOCAL GOVERNMENTS IN THE PROCESS OF HARMONIZING STANDARDS IN THE FIELD OF EMPLOYMENT WITH THE EU REGULATIONS**

Local governments need to focus on giving its contribution to the four key priorities in the field of employment defined the Agenda for new skills and jobs: the European contribution to full employment: the better functioning of the market work. Structural, chronically high unemployment rates represent an unacceptable loss of human capital: they discourage workers and lead to premature abandonment of the labor market and social exclusion. Flexicurity policies are the best instrument to modernize labor markets: they must be taken into consideration and adapted the post-crisis context, in order to accelerate the pace of reform, reduce labor market segmentation, support gender equality and profitability enable changing jobs and other transitions in the labor market. On a more skilled workforce, capable of contributing and adjusting to technological change with new forms of work organization. This is a significant challenge, given the necessary skills that are rapidly changing and continuous skills mismatches in the labor market of the EU. Investment in education and training systems, projections of skills needs and brokerage services and management are a key factor for increasing productivity, competitiveness, economic growth and ultimately employment. The higher the quality of jobs and working conditions. The quality and quantity of jobs do not exclude each other: high levels of quality jobs in the EU following equally high labor productivity and the level of activity. Working conditions and physical and mental health of workers must be taken into account in order to meet the requirements of today's professional career, which is characterized by increased labor turnover to more intense and demanding jobs and new forms of work organization. o Stronger policies to promote job creation and demand for labor. It is not enough to ensure that people remain active and acquire the right skills to find a job: the recovery must be based on growth which creates new jobs. Selective reduction of labor costs out of earnings or well-targeted employment subsidies can be an incentive for employers to hire long-term unemployed and other workers excluded from the labor market. To increase the employment rate are essential and policies for the use of key resources for job creation and the promotion of entrepreneurship and self-employment. All four aspects are essential for growth and development (employment is the surest way for a good social policy and out of poverty for those able to work). To achieve positive results in these priority areas is necessary coordination of all activities in the field of employment, contributing to all stakeholders and their participation (cooperation at local, regional and national level - between social partners, public employment services, social services, education and training institutions and civil society organizations), and the use of EU funds as leverage to support these priorities. Local government, which has adequate capacity for development and implementation of policy in the field of employment, which has a high degree of autonomy, that is effective, and up to date close to the citizens, it is one of the key holders European integration and the performance factor of the process. The ability and the ability of local governments that are involved in accession negotiations will largely determine at what time and with what success to the local level do not fully apply the EU acquis in the field of employment. Her active involvement and participation in the process of European integration includes access to various EU funds that support employment and partnership through various programs of cooperation. Success in obtaining and using funds from these funds, however, are not guaranteed just a simple fact that the local government has the opportunity to participate in them. In order to receive these funds local governments have to strategically plan their development, creating partnerships at different levels of governance and continually build their capacities. As in many local governments there are very limited capacity (human, institutional and financial) to engage in this process, it is necessary to focus activities on the achievement of organizational preconditions, take the appropriate preparatory work at the local level and establish good cooperation with the central government.

This job is not easy and requires both political support, but also a clear shared vision of the future among all stakeholders within the community they are a part, as well as the determination to implement the necessary actions to work. That the quality of the presence and involvement of local governments in the accession negotiations directly linked to the quality of those negotiations, undoubtedly showed the experience of countries in the region that have recently gone through the same process. Application of the standards and values of EU policies through local policy, it is essential to ensure sustainable socio-economic development of local communities and improve the lives of citizens. Membership of the EU for local governments implies the acceptance of the new framework in the process of policy and decision makers in the field of employment. Formally speaking, the EU is negotiating with representatives of the central government. However, taking into account the fact that EU membership has a great effect on the local government, it is necessary to ensure a smooth and timely flow of information from the central administration to local authorities, and vice versa. It is essential that local authorities are able to express their concerns and interests of the central government to make efforts to strengthen its cooperation with the central administration. Experience in other countries has shown that it is much more realistic that they do so through the national associations of local authorities, and not in individual communication with the central authorities. Today almost all the national associations of local governments, all major cities and most regions have their representative offices in Brussels, including the countries in our environment, such as, among others, Hungary and Romania. The main function of these offices in Brussels to represent the interests of local governments in order to achieve the highest possible benefit from EU membership. In some cases, local authority offices in Brussels and parts of the official national delegations. In other cases, offices are not part of the official representative of the countries from the EU, but because its employees are actively involved in all working groups in national parliaments or ministries in preparing attitudes that country on EU matters of importance to local governments.

## **5. THE DIRECTIONS OF REFORMS IN THE FIELD OF EMPLOYMENT AND THE CONVERGENCE OF THE EUROPEAN SOCIAL MODEL**

Areas in which they primarily need answers and solutions are: the reform of social security systems which include the concept of sustainability without loss of solidarity, a new direction in the employment policies together with the adjustment of labor legislation and greater the role of local governments in this area, new responses to demographic changes in some local governments, the adoption of policies for young people and so on. progressive, successful and sustainable reforms in the areas of employment must take into account the values and goals that the common parts of the EU Member States. Such reforms should be based on the values and principles that characterize European society: full respect for human dignity, recognition and application of basic rights, social justice, solidarity, non-discrimination, equal opportunities and social inclusion. The debate on the reform of employment policy should not be only transparent, accountable, but also open to suggestions and successful experiences of individual local governments. Clever assessment of successful policies, good practices and creative imitation can be a very useful strategy. In addition, demographic changes, such as low reproductive rate, especially in some devastated regions and local governments, should not be perceived as a threat to society, economic development and its sustainability. One just requires thinking in advance about the extent of working time, retirement age, productivity and quality of work, the relationship between the use of the experiences of older and desire for change and innovation, youth, etc. Local governments that are not made on time or adequately tasks listed above (paragraph 4) risks falling behind in their development, and thus affect the reduction in the quality of life of these communities. Bearing in mind that the EU at the local level usually participates in co-financing of projects in the areas of employment, without the existence of

efficient administration and good projects at the local level, they will miss important opportunities for progress in employment. Also, local governments that do not carry out the preparatory work of that time will not be able to adequately engage in the use of significant resources from the structural and cohesion funds, which will be available to Serbia after joining the EU. The first and main problem local authorities are facing is the lack of financial resources that they have. Local authorities are, of course, interested in obtaining funds from the EU to finance their projects. However, in the case of other countries that have recently become members of the EU, it has proved to be a serious problem that some local authorities do not have sufficient own financial resources that are required to obtain EU funds. The same problem could be faced by Serbia and if it doesn't provide resources to the budgets of local governments for co-financing projects. The role that local governments will have during the accession negotiations (Chapter 19 - Social Policy and Employment) is essential for the success of the results of the negotiations and in the implementation of the EU acquis in this area practically in the Serbian-political context. Local governments torque Serbia's full membership in the EU are part of a complex, multidimensional system of creating EU policy in the field of employment, which is based on the objectives, logic and instruments of governance at several levels of government, which is not easy to find a common framework of action.

## 6. CONCLUSION

At the national level the most important and most extensive part of the preparation for negotiations with the EU in the field of employment is related to the complicated process of analyzing and adapting national laws and other legal acts to the EU requirements. There are, of course, thoughts on what is often called in the professional community, "the application of the *acquis communautaire*", ie. Adoption of the Acquis. The experience of other countries, now members of the EU, has shown that some laws, due to the type field to which they relate, find, easier implementation at the national level, while others are more influenced by laws at the local level. In addition to the application of the "acquis" in the field of employment at the local level, this analysis suggests that the most important preparatory work for integration should be focused on the following:

- o Establishment of appropriate professional staff (teams) at the local level. Those teams should, in the context of local self-government, in addition to be trained in accordance with the local strategy for economic and social development, be trained for the preparation of project documentation and monitoring procedures for applying for EU funds. The said teams would, if necessary, identify external associates (due to the very limited financial capacity of local governments to hire such people, as well as legal restrictions on their employment) that could be helpful when filling out numerous procedures, data and methodology of planning which are a prerequisite for approval of projects funded by the EU.
- o Launch and implement of a training program aimed at all employees in the local government introduced to the basic principles of the functioning of the EU legal instruments used in European regulations in the field of employment. It is necessary to better inform on the implications of EU membership, including general information regarding the structural changes, regional policy and accompanying support measures for employment.
- o It is essential that the trained professionals at the municipal level develop excellent interpersonal communication and communication with neighboring municipalities, regional chambers of commerce and other regional employers' associations (ie, horizontal communication). Likewise, we must not neglect the importance of developing a successful vertical communication, ie. communication with the relevant competent bodies such as the National Integration Office, line ministries and even the government itself. In order to establish effective vertical communication it would be advisable that experts from the local level and be familiar with the national strategy of development, employment and national action plans.

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## MECHANISM OF REGIONAL COOPERATION BETWEEN WESTERN BALKANS STATES IN FIGHT AGAINST ECONOMIC CRIME

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### ABSTRACT

*The paper examines the regional cooperation between the countries of the Western Balkans and available mechanisms for it. Bearing in mind that all countries are in the process of EU accession, they must above all have to harmonize their legal frameworks. However, it is much more important to first of all establish communication and cooperation and show the EU that they are able to cooperate outside the EU framework. In this way, it will show readiness to fight organized and serious crime and easier to fulfil the conditions necessary for full EU membership. The paper contains the analysis of currently state and possible future development of economic crime in Western Balkan countries. The authors conclude that the countries of the Western Balkans have so far shown a solid level of cooperation and coordination, but that they have places for improvement. To this end, the best possible mechanisms are proposed that can help in the area of combating economic crime.*

**Keywords:** *Western Balkan, economic crime, cooperation, European Union*

### 1. INTRODUCTION

The fundamental pillar of every democratic society, the guarantee of the protection of fundamental human and minority rights and freedoms as well as the effective enforcement of the laws are independent, responsible, professional, effective and efficient state institutions that the countries of the Western Balkans have yet to build. Regarding the building of democratic, modern and responsible authorities such as the police, customs, prosecutors and courts that will effectively and quickly confront crime (especially organized crime) are a guarantee of the protection of fundamental rights. Such institutions, in accordance with their competencies and obligations, should ensure the rule of law and the protection of fundamental freedoms and rights. Strictly geographically observing the term 'Western Balkans' covers Slovenia, Croatia and Bosnia and Herzegovina. On the other hand geopolitically the term was established after Croatian entry in European Union (EU) and refers on non-EU states Bosnia and Herzegovina, Serbia, Montenegro, North Macedonia and Albania. With the exception of Albania, all countries once were republics of the former Yugoslavia, but all of them were republics with a communist (socialist) state system before the fall of the Berlin Wall. All countries are candidates for admission to the EU and are currently working on the harmonization of their state (social) systems with the EU system. The economic crimes are part of 'shadow economy'<sup>1</sup>. It is very difficult to assess the shadow economy because there is vast of assessing methods for doing that. The European Parliament's assessment is that the EU loses annually about €1,000 billion because of a shadow economy. Almost 2/3 of the size of the shadow economy of recent years has been contained in the EU's economically most powerful member states – Germany, France, Italy, Spain and the UK.

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<sup>1</sup> Synonyms are grey economy, black market economy, underground economy, unofficial economy etc.

However, in countries in the east of the EU and with weaker economic activity, the size of the shadow economy is considerably higher than in the official data on the economies of other member states (Nikolić, Čudan, Djordjević, 2016:166). The eastern or central European countries and/or the 'new' EU members, such as Bulgaria, Cyprus, the Czech Republic, Latvia, Lithuania and Poland have higher shadow economies than the 'old' EU countries, like Austria, Belgium, Germany and Italy; hence, we have an increase of the size of the shadow economy from west to east. On average, the southern European countries have considerably higher shadow economies than those of Central and Western Europe. The five non-European highly developed OECD countries (Australia, Canada, Japan, New Zealand and the USA) have lower shadow economies with an average size of about 10.1 % of GDP in 2009, which was assessed that will decreased to 8.6% in 2015 (Schneider, 2015).<sup>2</sup>

## 2. UNDERSTANDING THE ECONOMIC CRIME

Historically, the definition of economic crime has changed in line with changes in the sphere of economics. The period in which the object of economic crime in Serbia was a social property was characterized by attempts to define this concept in which social economies, national assets in the exercise of economic activity, socialist self-management system etc. are considered as a key element for determining the definition. Given the aforementioned changes in the socio-economic and political system of the Serbia, as well as the property transformation, the definitions of the economic crime from this period are losing on the actuality and therefore on the importance. In this regard, there is a need for defining this type of criminal manifestation in line with the actual changes in the socio-economic and political system of the Serbia (*auth. rem.* and wider in the region of Western Balkan). Therefore, in today's socio-economic and political conditions, when the economic system no longer bases itself on the dominant role of social ownership over means of production, it is logical that not even the concept of economic crime can be tied solely to criminal attacks on social property, but must be taken into account the current changes, and above all the pluralism of property relations, the market economy that replaces the negotiated one, the increase in the number of economic entities and the circle of persons who may appear as perpetrators of criminal acts in the field of economic crime (Nicević, Ivanović, 2012:90). In Western Balkans literature there is plenty of definitions economic crime. For instance under the notion of economic crime, implies all forms of criminal activity directed against the economic system and its functioning, regardless of whether they were undertaken within or outside the economic business (Aleksić, Gašić, 1993:138 in M. Bošković, 2005). Economic criminals involve only those forms of behaviour in an economic relationship that can be linked to subjects of some authority or duty in that refer regardless of the form of ownership and property (Pihler, 1993:35-38 in M. Bošković, 2005). Some scholars defines economic crime as all delicate behaviour (acts or omissions) arising in economic relations and in relation to such relations by legal persons and legal entities who, as subjects of these relations, possess the appropriate powers to the property on which these relationships are based, which directly damages those assets by offending behaviour and hurts or endangers economic relations (Banović, 2005:28). Others define financial crime as a behaviour that deviates from the normal performance of public duties for personal (family, private clicks, interest groups); it is a violation of norms for the purpose of personal interest (Novaković, Vukasović, 2014:174). Economic crime in criminal-law and criminological sense represents the totality of delicts (felonies, economic offences and misdemeanours) that jeopardizes normal organization, management and functioning of economic system (relations and processes) in one

<sup>2</sup> Available at

[http://scholar.google.com/scholar\\_url?url=http://www.econ.jku.at/members/schneider/files/publications/2015/shadeceurope31.pdf&hl=sr&sa=X&scisig=AAGBfm1JWsHruLM8gx2nYJIWeWDYAkU9GA&noss1=1&oi=scholar](http://scholar.google.com/scholar_url?url=http://www.econ.jku.at/members/schneider/files/publications/2015/shadeceurope31.pdf&hl=sr&sa=X&scisig=AAGBfm1JWsHruLM8gx2nYJIWeWDYAkU9GA&noss1=1&oi=scholar) accessed on 09.04.2019

community (M. Nicević, A. R. Ivanović, 2013:17). In the sense of the pre-accession negotiations of the Western Balkan country, it will have to adopt the EU's view points. In 1981, the European Committee on Crime Problems<sup>3</sup> recommended that economic criminality in the *broader sense* include: cartel crime, fraud by misusing the economic position of multinational companies, misuse of state or inter-ethnic organizational powers, computer crime, fictitious companies, forgery of final accounts and accounting crime, fraud related to the economic position and capital of the organization, breach of security standards and health insurance of employees, which are endangering creditors, consumer fraud, unfair competition, financial crime and the deterioration of corporate social costs, customs fraud and violations, acts affecting monetary policy, crime in relation to stock and banking, and environmental crimes<sup>4</sup>.

### 3. REGIONAL COOPERATION BETWEEN WESTERN BALKANS STATES

Looking from the perspective of the scope of cooperation it can be multilateral or bilateral. Multilateral involves the cooperation of several states within an international organization or participation in some international meetings within or outside these organizations, but in any case with the signing of certain documents (agreements, conventions, resolutions, etc.) that are legally binding for all States Parties. As an example, it can be indicated the cooperation of the states within the UN (and their agencies), INTERPOL, EUROPOL, SELEC and international meetings in their organization. Under bilateral cooperation it means the relationship between the two countries that are mutually agreeing on the manner and scope of cooperation in certain areas with the signing of a particular document, for example, agreement. When it takes into account the level of cooperation it can be divided in international and regional level. International level means that all or the most of the states are included in mutual assistance that is issued with multilateral arrangements. The regional level refers on mutual assistance which is issued with multilateral arrangements between some countries that form unique territorial space with common rules, crime problems, legislation etc. The cooperation within EU may consider as a form of regional level because it consist only the EU Member States. There are other forms of regional cooperation such as Benelux Police Treaty, Nordic states' cooperation, cooperation between Southeast Europe states etc. If, as a criterion for the classification of international cooperation, it takes the area in which it is played, it can be a judicial (criminal justice), police, customs and other areas of social life. In operational terms, the international criminal cooperation of the states in the field of prevention and suppression of all forms of crime is realized as: international judicial cooperation (criminal justice assistance) and international police cooperation (Gajić, Spasić, 2014:146). International criminal justice assistance can be understood in a broadly and narrower sense. In a broader sense, international criminal justice assistance includes any action or measure in progress, during and after the criminal proceedings, the authorities of a state in order to achieve cooperation in a specific criminal matter (for example, witnesses' hearing, gathering evidence for the purposes of the proceedings, criminal prosecution, execution of a foreign criminal conviction). In the narrower sense, international criminal justice includes only part of the legal assistance and consists in providing assistance to foreign state authorities during the course of the criminal proceedings. This type of assistance is known in the doctrine as 'small' or 'primary' criminal justice assistance (Nikač, 2015:232). International police cooperation involves the exchange of actionable intelligence and experience, police missions, liaison officer's exchange, the execution of some procedures (extradition, arresting, etc.), the conduct of joint actions, the work of joint investigation teams (JITs), education, training and other procedures to assist the police of other states. International customs cooperation implies the implementation and execution of international customs agreements and conventions, exchange of information and experience,

<sup>3</sup> <https://www.coe.int/en/web/cdpc> accessed on 09.04.2019

<sup>4</sup> See in (Sijerčić-Čolić, 2014:13)

the conduct of joint actions and patrols and all other procedures that assist the customs service of other states. International cooperation in other areas of social life could imply the mutual assistance of chambers for commerce, tax administrations, cooperation between inspections etc. International criminal justice assistance, according to states' legal framework, includes several different mechanisms: 1) extradition of the defendant or convicted person; 2) taking over and transferring criminal prosecutions; 3) enforcement of final criminal verdicts; 4) other forms of international criminal justice assistance (e.g. the execution of certain criminal procedures, the delivery of a court's papers) (Božić, Leštanin, Nikač, 2018:160). Most states prohibit the extradition of their nationals by their domestic legislation. However, EU Member States have a different legal framework which guarantees the exercise of the freedom and rights of EU nationals in their entirety, so that between EU Member States it is possible to extradite and own nationals too<sup>5</sup>. It was previously point out that all Western Balkans countries are in the process of EU accession. There is a slightly different legal framework for the EU Member States in the field of international criminal justice cooperation. This issue is regulated with Framework Decision of Council of the EU from 13 June 2002 on the European arrest warrant and the surrender procedures between member states, 2002/584/JHA, Official Journal L 190, 18/07/2002<sup>6</sup>. European Arrest Warrant (EAW) is the first and concrete legal (legislative) mechanism in the field of criminal justice cooperation within the EU. It is based on the principle of mutual recognition of court decisions by member states and is intended to be at the official level of the EU a paradigm of judicial cooperation in criminal matters (Ivanović, Totić, 2017:128). With the introduction of a EAW in the EU legal system, the subjects of the extradition procedure are no longer a member state than the courts of the Member States that automatically recognize the decisions of the courts of other States on the arrest warrant ('judicialization' of the proceedings) (Djurdjić, 2012:26). The positive effect of EAW is reflected in several facts: a) a quicker, more economical procedure, reduced to technical elements and without obstruction of the procedure; b) the political influence on criminal cases has been reduced; c) the possibility of extraditing domestic citizens to another Member State has been established, and d) additional protection of the rights of the accused and convicted persons has been ensured. Depoliticising the procedure and removing illegal behaviour is an extremely important issue for the success of the EUN mechanism, especially when it comes to the request of a foreign state to extradite a domestic citizen (Božić, Knežević, Nikač, 2018:26). In organizational sense the criminal justice cooperation in the area of economic crime can goes through international organizations such as UN, Council of Europe, and EUROJUST<sup>7</sup>. Also it can be talked about European Crime Prevention Network-EUSPN, European Police College – CEPOL, European Network and Information Security Agency – ENISA etc.<sup>8</sup> On UN level the World Customs Organization (WCO) represents independent intergovernmental body whose mission is to enhance the effectiveness and efficiency of Customs administrations. Today, the WCO represents 182 Customs administrations across the globe that collectively process approximately 98% of world trade. As the global centre of Customs expertise, the WCO is the only international organization with competence in Customs matters and can rightly call itself the voice of the international Customs community. On the other hand as a forum for dialogue and exchange of experiences between national Customs delegates, the WCO offers its Members a range of Conventions and other international instruments, as well as technical assistance and training services provided either directly by the Secretariat, or with its participation.

<sup>5</sup> For example the Croatian citizen may not be forcibly exiled from the Croatia, nor extradited to another state, except in case of execution of a decision on extradition or surrender made in compliance with international treaty or the *acquis communautaire* of the EU.

<sup>6</sup> Available at

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002F0584:EN:HTML> accessed on 09.04.2019

<sup>7</sup>European Body for the Enhancement of Judicial Cooperation

<sup>8</sup> Further reading in (Nikač, 2015:159-161)

Besides the vital role played by the WCO in stimulating the growth of legitimate international trade, its efforts to combat fraudulent activities are also recognized internationally (<http://www.wcoomd.org/en/about-us/what-is-the-wco.aspx>, 09.04.2019). Conclusion is that WCO their task execute through diverse of meetings, programs, forums, trainings, educations (working shops), issuing publications, databases, networks, researching etc. The Directorate General Human Rights and Rule of Law is body of Council of Europe and it is responsible for the development and implementation of the human rights and rule of law standards of the Council of Europe, including the promotion of democracy through law, the operation of relevant treaties and related monitoring mechanisms and the development and implementation of activities in these fields. In particular that consist the prevention of torture and inhuman or degrading treatment or punishment; bioethics; the protection of freedom of expression and of information in the information society and of media freedoms; the promotion of independent, pluralistic media; the fight against all forms of crime, including terrorism, corruption, money laundering and cybercrime; the strengthening of international cooperation in criminal matters, including with regard to prisons, and in matters of public and private law, including with regard to nationality, family law and data protection and the promotion of independent and efficient justice. The Directorate General is divided into three organizational forms: Human Rights Directorate, Information Society and Action against Crime Directorate and Venice Commission. He accomplishes his tasks through the following activities: Committees (intergovernmental and convention), Consultative bodies (judges' and prosecutor's councils and Commission for Efficiency of Justice), Partial/Enlarged Agreements (Venice Commission, GRECO and POMPIDOU group), monitoring mechanisms, co-operation projects and ministerial conferences (<https://www.coe.int/en/web/human-rights-rule-of-law/mandate-organigramme>, 11.04.2019). EUROJUST as EU judicial coordination unit was established by Council Decision 2002/187/JHA<sup>9</sup> regarding the attacks of 9/11 in the USA, where the focus on the fight against terrorism moved from the regional/national sphere to its widest international context and served as a catalyst for the formalization. Historically the discussion on the establishment of a judicial cooperation unit was first introduced at a European Council Meeting in Tampere, Finland, in 1999, attended by heads of state and government. This meeting was dedicated to the creation of an area of freedom, security and justice in the EU, based on solidarity and on the reinforcement of the fight against trans-border crime by consolidating cooperation among authorities (<http://www.eurojust.europa.eu/Pages/home.aspx>, 11.04.2019). EUROJUST stimulates and improves the coordination of investigations and prosecutions between the competent authorities in the Member States, and improves the cooperation between the competent authorities of the Member States, in particular by facilitating the execution of international mutual legal assistance and the implementation of extradition requests. At the request of a Member State, EUROJUST may assist investigations and prosecutions concerning that particular Member State and a non-Member State if a cooperation agreement has been concluded or if an essential interest in providing such assistance is demonstrated. EUROJUST's core business is to assist the competent authorities of Member States, when they deal with serious cross-border and organized crime, such as: terrorism, trafficking in human beings, illegal immigrant smuggling, drugs and arms, the sexual exploitation of women and children, cybercrime, online child abuse, various kinds of fraud and money laundering, counterfeiting and environmental crime (<http://www.eurojust.europa.eu/Pages/home.aspx>, 11.04.2019). Organizationally speaking the main body in international police cooperation is ICPO-

<sup>9</sup>In December 2008, Ministers of Member States at the Justice and Home Affairs Council adopted a revised Council Decision on the strengthening of EUROJUST. The aim of the Decision is to develop EUROJUST's potential to help fight transnational organized crime. Measures include increasing the interchange of information about serious cross-border cases, and making EUROJUST available to national authorities on a 24/7 basis. Where necessary, transposition of the revised Decision into Member State law was to take place by 4 June 2011

INTERPOL<sup>10</sup> which represents the supra-national institution in charge for giving the assistance to national police in criminal matters and has 192 member states. In another word it is in charge to ensure that police around the world have access to the tools and services necessary to do their jobs effectively and provide targeted training, expert investigative support, relevant data, and secure communications channels. INTERPOL aims to facilitate international police cooperation even where diplomatic relations do not exist between particular countries. Action is taken within the limits of existing laws in different countries and in the spirit of the Universal Declaration of Human Rights. Any intervention or activities of a political, military, religious or racial character is prohibited for INTERPOL (<https://www.interpol.int/About-INTERPOL/Overview>, 12.04.2019). The basic tasks of the Organization are the following: exchange of operational information (auth. rem. intelligence); delivery and exchange of professional materials (photographs, dactyloscopic files, criminalistics-technical and forensic material); search for persons (international warrants); services to judicial (court) bodies; printing and distribution of specialized publications (magazine, publications, professional materials, texts); conducting criminal records and documentation (collections, archives, investigations, analytical studies); linking and coordinating measures and activities of criminal investigations; training and education; technical assistance and other (Nikač, 2015:126-127). In terms of economic crime there are no obstacles in cooperation except the 'political will'. INTERPOL's Trafficking in Illicit Goods and Counterfeiting program is a multi-dimensional initiative to combat all forms of illicit trade. Trafficking in illicit goods is a generic term used by INTERPOL to describe all types of illicit trade. It includes such practices as counterfeiting (trademark infringements), piracy (copyright infringements), smuggling of legitimate products and tax evasion. Selling fake or counterfeit products as the real thing is one aspect of this crime; so is selling genuine goods on the black market to avoid paying taxes. By avoiding regulatory controls the criminals behind these activities typically peddle often dangerous goods with a complete disregard for the health and safety of consumers. The phenomenon has grown to an unprecedented level, posing tremendous risks to society and the global economy. A key aspect of the program involves offering comprehensive legal assistance to member countries, to ensure they have strong domestic legal frameworks and the knowledge to apply them effectively. In that purpose INTERPOL has following services: assisting in the reform of domestic laws, capacity building and training, providing legal advice, expert colloquia and online expert forum (<https://www.interpol.int/Crime-areas/Trafficking-in-illicit-goods-and-counterfeiting/Trafficking-in-illicit-goods-and-counterfeiting>, 12.04.2019). All Western Balkan countries are members of INTERPOL and have their representatives in it. Also as it was pointed out they have their own NCBs in police services and they work 24 hours a day. Police officers who work in NCB have a lot of experience in police work, speak mainly English language and have contacts either with their national police departments or worldwide. They can exchange the actionable intelligence and professional materials on illicit trade and smuggling, coordinate joint investigations and operations to intercept the perpetrators and catch them on the crime spot, give to each other a technical assistance etc. EUROPOL is another organization on the supra-national level for police cooperation but only between the EU Member state and their partners. It is actually an EU law enforcement agency for supporting the EU Member States in their fight against terrorism, cybercrime and other serious and organized forms of crime. Main elements of EUROPOL services and support are data bases, Operational Centre, information exchange (SIENA<sup>11</sup>, EIS<sup>12</sup> and EPE<sup>13</sup>), strategic analysis, intelligence analysis, forensics, training and capacity building, Joint Investigation Teams, and Joint Cybercrime Action Taskforce (J-CAT)

<sup>10</sup> International Criminal Police Organization (Fr. Organisation internationale de police criminelle-OIPC)

<sup>11</sup> Secure Information Exchange Network Application

<sup>12</sup> Europol Information System

<sup>13</sup> Europol Platform for Experts

(<https://www.europol.europa.eu/activities-services/services-support>, 12.04.2019). Western Balkan states have established cooperation with EUROPOL through agreements<sup>14</sup> that need to be ratified by their authorities until their fully membership in EU<sup>15</sup>. EUROPOL is providing EU law enforcement authorities with 24/7 operational support. The support is delivered in mandated areas and also in cases crossing several criminal areas. For example in October 2017 there were Joint Action Day Dual coordinated by FRONTEX and co-led by Austria and Germany. Joint Action was focused on counteracting the facilitation of illegal immigration done by means of clandestine entries within trucks, cargo trains and containers, combined with smuggling of excise goods. A coordination centre was set up in Joint Operational Office Vienna to bring together liaison officers from EU Member States, Third Country and EU Agencies dealing with migrant smuggling and trafficking in human beings and to support investigations. Customs authorities from 4 EU Member States joined efforts with police and border guards on national level. In this Action 24 suspected people smugglers were arrested, 761 irregular migrants were detected and 119 people were refused entry. Authorities also recovered 19 stolen vehicles. During the operation smuggled cigarettes, alcohol and drugs were also detected, along with weapons and ammunition. Cross-checks against the databases generated nearly 170 hits. Regarding the Western Balkans countries that were participants in it there were Croatia, North Macedonia and Serbia (<https://www.europol.europa.eu/activities-services/europol-in-action/operations>, 15.04.2019). For the purpose of this manuscript it can be single out two documents: Police Cooperation Convention for Southeast Europe (PCC SEE)<sup>16</sup> and Convention of the Southeast European Law Enforcement Centre (SELEC Convention)<sup>17</sup>. Contracting parties in PCC SEE except the Western Balkan countries (without the Croatia) are Austria, Bulgaria, Hungary, Moldova, Romania and Slovenia. The aim of PCC SEE is to improve the police cooperation and mutual police assistance in the area of cross-border threats to public order, security and international crime. In sense of economic crime it is important to mention that contracting parties have to provide enhancing cooperation during the operations and investigations due to prevent, detect and investigate certain threats with deploying the forces in the neighbouring border areas, holding the meetings, sending the observers in special operations etc. Policing in border areas is particularly important for suppressing the smuggling of goods across the border where parties must exchange the intelligence if they want to success in 'guarding the border'. Additionally they should exchange the intelligence regarding the organized crime, new types of cross-border crime and all other fact that are important for one of the party. In sense of cooperation in the area of economic crime main organs in SELEC are National Units apart from other organs. The National Units are established by the Member States for the purpose of implementing the objective of SELEC Convention and they consist of Liaison Officers and National Focal Points (NFP). Liaison Officers are representatives of SELEC Member States posted to work at the Headquarters of SELEC for the purposes of police and customs cooperation. NFP is a single point of contact in the Member State for communications with SELEC, through the Liaison Officers of the respective Member State (<http://www.selec.org>, 15.04.2019). SELEC operational activities are conducted within the frames of eight Task Forces addressing issues of drugs and human beings trafficking, stolen vehicles, smuggling and customs fraud, financial and computer crime, terrorism, container security and environmental and nature related crimes (<http://www.selec.org>, 15.04.2019). Task Forces assume joint cooperation and participation of SELEC Member States law enforcement representatives, aiming to share information, best practices and effective crime-fighting and

<sup>14</sup> There are two types of agreements strategic and operational.

<sup>15</sup> Albania, B&H, North Macedonia, Montenegro and Serbia have Agreements in Operational and Strategic Cooperation between them and EUROPOL

<sup>16</sup> Available at <http://www.pccseesecretariat.si/index.php?page=documentspcc&item=35> accessed on 15.04.2019

<sup>17</sup> Available at <http://www.selec.org/docs/PDF/SELEC%20Convention%20%5Bsigned%20on%2009.12.2009%5D.pdf> accessed on 15.04.2019

prevention tools in the Southeast European region. For the fighting against economic crime it must be pointed out that there is Anti-Fraud and Anti-Smuggling Task Force as a main proactive and repressive tool. The Task Force was born as a result of merging in 2003 of two SECI Centre task-forces: the commercial fraud task force coordinated by the Customs Administration of the Republic of Croatia and the task force on customs valuation fraud coordinated by the Albanian Customs (<http://www.selec.org>, 15.04.2019). The Anti-Smuggling and Anti-Fraud Task Force has ensured effectiveness in assisting member countries to combat smuggling and customs fraud. The positive influence was mainly achieved by exchanging case information, coordinating regional anti-smuggling operations and supporting joint investigations on cigarette smuggling among the member countries. From the very beginning, the activity of the task force was centred on regional operations, in order to have a clear picture of the smuggled goods, especially cigarettes, and to set up an active assistance system among the authorities in the region in order to stop the illegal traffic and the fraud attempts. In June 2004 the SECI Centre Task Force on Anti-Fraud and Anti-Smuggling approved the proposal of Hungarian Customs and Financial Guard to implement a regional operation focused on cigarettes smuggled via all forms of transportation (air, sea, rail and road). The exercise was code-named Operation SHADOW and it principally aimed at exchanging information and producing a situation report on cigarette smuggling based on details of seizures made in SEE during a specific period. In 2007 the regional information exchange on cigarette smuggling was boosted during the Operation SHADOW II. SECI Centre had an excellent cooperation with WCO and Italian Guardia di Finanza (<http://www.selec.org>, 15.04.2019).

#### 4. CRIME RATES IN WESTERN BALKANS

This part of paper contains the analysis of currently state and possible future development of economic crime in Western Balkan countries<sup>18</sup>. Authors will examine the crime rate per 100.000 of total crime and economy crime. Crime rate will be calculated with following formula:

$$Cr=(C:Pc) \times I$$

Where **Cr** represents crime rate, **C** is the number of crimes reported to police, **Pc** is total number of population by census and **I** represents stand (index) number of 100.000. For purpose of analysis it will be used data of number of crimes reported to police send by ministries of interior of Western Balkan countries or available on official web sites<sup>19</sup> and data from latest census from Western Balkans countries available on internet<sup>20</sup>. The population number is changeable from year to year but not in all countries those data are available. Because of that it will be used only the data from latest census. This could be criticized as inaccurate and doubtful data but in these circumstances it was only available. On the other hand many of Western Balkan countries are known as tourists' destination and they have large diasporas. On the time of holidays and in tourists' seasons the number of dwellers is increased what also could be taken into account in calculating the crime rate. For this kind of assessment author doesn't has enough time or resources. The total crime rates in Western Balkan states vary during the period 2012-2017 (Chart 1). The leaders are Croatia and Serbia with highest rates among all of them. Croatia has had highest rates in 2012, 2015 and 2017 and Serbia in 2013, 2014 and 2016. North Macedonia was following them in 2012, 2013 and 2014 on a second place and in 2015, 2016 and 2017 on

<sup>18</sup> Exceptions are Albania and Serbia. Albanian police authorities didn't send any data concerning this issue and Serbia will be examine without Kosovo and Metohija because the self-government authorities also didn't provide any data although the authors requested several times.

<sup>19</sup> <https://mup.gov.hr/>, <http://mup.vladars.net/index.php>, accessed on 15.04.2019

<sup>20</sup> <https://www.dzs.hr/>, <http://www.bhas.ba/>, <http://popis2011.stat.rs/>, [http://www.stat.gov.mk/Default\\_en.aspx](http://www.stat.gov.mk/Default_en.aspx) and <http://www.monstat.org/cg/index.php> accessed on 15.04.2019

the third place after the Croatia or/and Serbia. B&H has higher rates comparing with Montenegro with the exception of 2017 when Montenegro was before B&H. If take into account that Croatia and Serbia have biggest population, that they are political, economic and social leaders in the region presented crime rates are understandable.

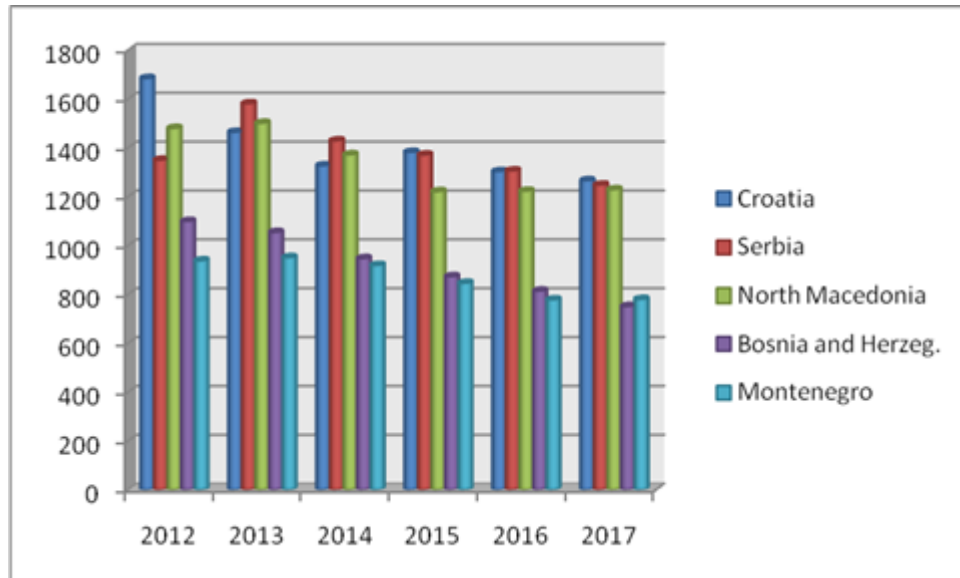


Chart 1: Total crime rate in Western Balkan countries and Croatia between 2012 and 2017

Analysis of economic crime rate has shown slightly different situation (Chart 2). Croatia stays a leader in the region with highest economic crime rate. Serbia and Montenegro are following the Croatia where Serbia was on the second place in 2012, 2016 and 2017 and Montenegro was on the second place in 2013, 2014 and 2015. In all observing years the North Macedonia has higher economic crime rates than B&H who has lowest economic crime rates among all states.

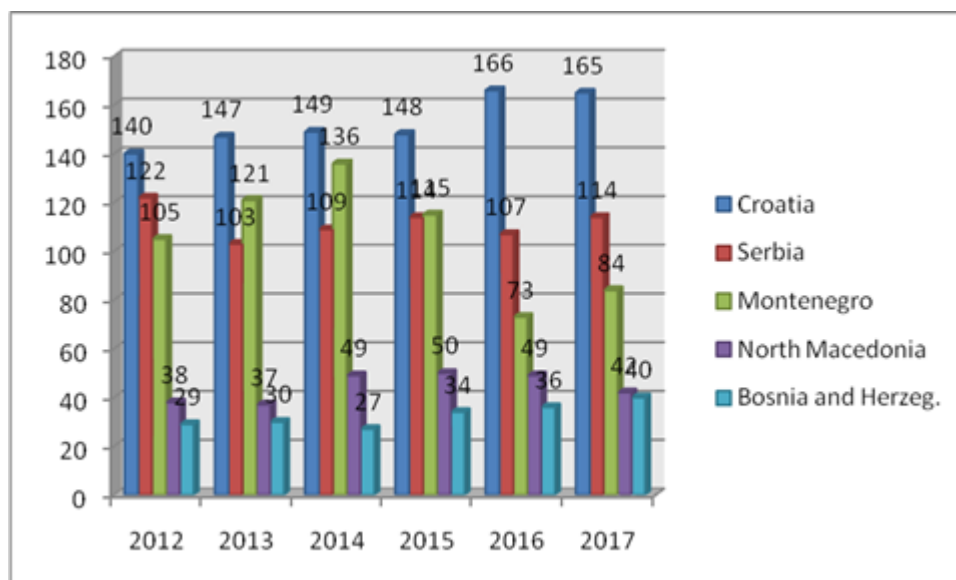
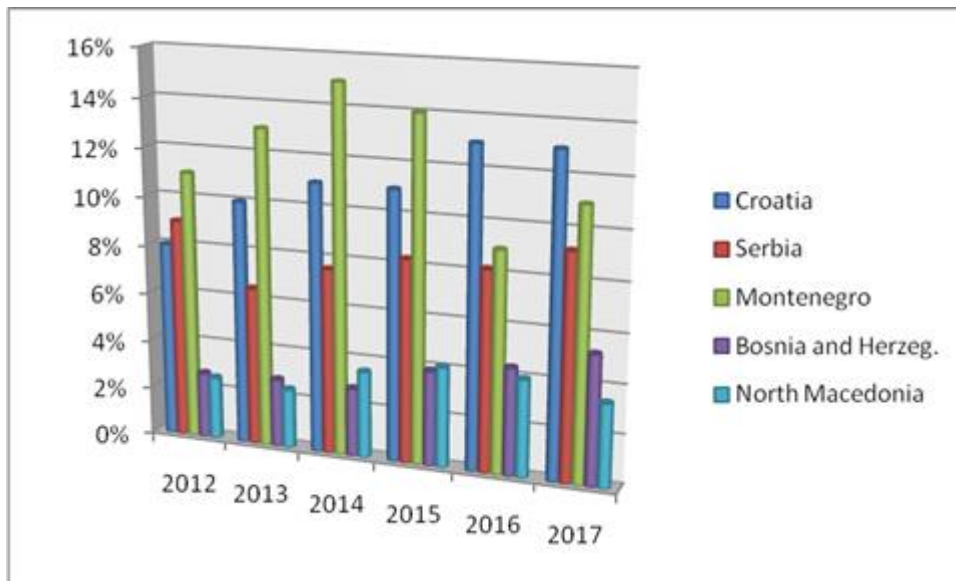


Chart 2: Economic crime rate in Western Balkan countries and Croatia between 2012 and 2017

The leader in participation of economic crime rate in total crime rate (Chart 3) between 2012 and 2017 is Montenegro, Croatia has little less participation and on the third place is Serbia.

In observing years the North Macedonia has higher participation of economic crime rates than B&H only in 2014 and 2015. In other years the B&H has higher participation of economic crime rates than North Macedonia.



*Chart 3: Participation of economic crime rate in total crime rate in Western Balkan states and Croatia between 2012 and 2017*

Presented crime rates in Western Balkan countries in observing period can be evaluated as medium. One must be pointed out that all states and their police and customs authorities must do more and show higher level of accountability in preventing this kind of crimes. Additionally when felony is already perpetrated police on the first place and customs, prosecutor and other state authorities must give more effort to detect it, gather evidence and find perpetrator(s) and illicit goods.

## 5. CONCLUSION

Most of Western Balkan countries are members of international and regional organizations that are dealing with counter-crime operations especially organized and serious crime, terrorism and corruption. Some mechanisms of international cooperation are susceptible to political influence and interference and other not. The main feature is level of communication. If the communication goes through political instances then the mechanism could be misused by them if not then it will stay on the vacation level. Extradition as one of mechanism is very susceptible to political influence where the final decision is made by minister. On the other hand the JITs consists the professionals from police, customs and judicial authorities and they are guided by rules and principles of profession. Except the JITs the Western Balkan countries in fight against economic crime should use joint operations, exchange actionable intelligence and experience, joint training and education, joint execution of special investigation techniques (procedures) etc. In that purpose they could use already existing membership in international organizations (UN, INTERPOL, WCO, EUROPOL, EUROJUST) or/and in regional one (PCC SEE, SELEC). Also states can set up a mechanism similar to an EAW, for example, a 'Western Balkan arrest warrant'. For that purpose they could use regional initiatives (PCC SEE, SELEC). As it has been already shown Western Balkan countries until now did some joint operations with respectable successes. In the future the mutual cooperation should be improved and intensified not only in area of illicit trade and smuggling but also on other types of crimes especially organized and serious one. JITs are probably the best and most effective mechanism

for international co-operation, since it enables the timely exchange of actionable intelligence, experiences, and best practices during the investigation, with the application of a multidisciplinary approach to problem solving. The situation and the movement of economic crime is very difficult to perceive, since it is probably more than in other criminal acts that the so-called 'dark number'. Tendencies in this form of crime could probably be more realistically considered if the statistical data were corrected during the analysis by factors contributing to the conduct of these crimes, based on the presence of which could be assessed the real state and the movement of economic crime.

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# FREE ECONOMIC ZONES WITH SPECIAL REFERENCE TO THE ZONES IN THE REPUBLIC OF NORTH MACEDONIA AND REPUBLIC OF SERBIA

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## **ABSTRACT**

*As we are living in highly regulated economic environment and we are also witnesses of frequent trade wars between the countries or group of the countries, formal or non-formal barriers, the free economic zones are recognised as a solution to avoid them. The benefits from creating free economic zones are countless, and are recognized by both, developed and developing countries. The free economic zones are especially important for the developing countries because they have direct impact on the economic development of the country and they can be one of the ways to enable the decreasing of the gap between developing and developed countries. Also, because of the significant inflow of foreign direct investments, the transfer of new technologies, increasing the living standards and decreasing the unemployment rate in the developing countries. About this, witnesses the number of free zones in the world, which is assumed that exceeds the number of 10.000. In the first part of this paper, will be explained the general characteristics and the pros and cons of the of the free economic zones. In the second part of this paper, will be analyzed the legislation regarding the free economic zones in the Republic of North Macedonia and the Republic of Serbia, as good examples for developed free economic zones in the region. By using a comparative method, I will try to evaluate the effects of the free economic zones in both countries and make recommendations for future improvement.*

**Keywords:** *foreign direct investments, free economic zones, government, incentives, regional economic development*

## **1. INTRODUCTION**

Developing countries, in order to attract foreign investments, because of the increasing the economic growth and stimulate competitiveness, implement policies for opening free economic zones. The concept of free zones has been quite popular in the last few decades, and it is estimated that there are more than 10,000 free economic zones in more than 130 countries and also it is estimated that over 65 million people are employed<sup>1</sup>. In literature, the free economic zones can be found with multiple names, depending on the characteristics and purpose for which the free economic zones were established. It is difficult to give a general definition for what is a free zone, because it is quite a complex matter and because the type, structure and way of organizing, economic zones varies from country to country and depends on the level of development of the country and political organization. The most commonly cited definition, is definition of Farole (2011)<sup>2</sup>, according to which: Zones are demarcated geographic areas contained within a country's national boundaries where the rules of business are different from those that prevail in the national territory. These differential rules principally deal with investment conditions, international trade and customs, taxation, and the regulatory environment; whereby the zone is given a business environment that is intended to be more

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<sup>1</sup> Singa Boyenge Jean Pierre, 2007, ILO database on export processing zones (Revised), International Labour Organization, Geneva, p.5

<sup>2</sup> Farole, T. 2011, Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences, World Bank, p.23

liberal from a policy perspective and more effective from an administrative perspective than that of the national territory. Different legal regulations in the countries is usually related with conditions for investment, trade, customs fees, taxation, where is usually necessary the business environment in the zones to be more liberal in terms of national, as well to be more efficient from an administrative point of view. According to the FIAS 2008 Report, the purpose of the free zones is expressed through 4 political goals:

- Attraction of foreign direct investments
- Acting of the economic zones as "pressure valves" for reducing the unemployment rate
- Supporting a wider strategy for economic reforms in the area of customs policy, trade, financial opening and reforms in the labor market
- To serve as experimental places where will be applied new policies and new approaches

## **2. ASSUMPTIONS FOR SUCCESSFUL FUNCTIONING OF THE FREE ECONOMIC ZONES**

In order for the free zones to operate successfully and to produce the desired effects in the economies of the countries, it is necessary for the national counties to provide the following conditions:

- Existence of a stable legal and institutional framework  
The existence of a stable and transparent legal and institutional framework in the country where the Free Zone is organized is one of the most important assumptions for the successful functioning of the free zones. The existence of a stable and transparent legal system and the existence of legitimate government reduces the risks to investors, and increases their confidence in the country where they invest and bear their capital. The state needs to ensure lower levels of corruption.
- Including the free economic zones in the development strategy  
For the successful operating of the free economic zones, countries need to include free economic zones in their development strategy, i.e. they need to make detailed strategic planning and infrastructure development, to attract investors with as high level of technological development as possible. It is also necessary to consider the environmental sustainability of the zones.
- Creating an attractive business environment, including good infrastructure and efficient public services  
One of the key objectives of free economic zone programs is overcoming restrictions for doing business in an economy. This means that tax, customs and other public services related to the functioning of the free economic zones must be simplified. Instead of focusing on fiscal stimulations, zones should strive to provide an environment that will contribute to the well-functioning of the business. Such programs must provide good infrastructure, as electricity, water, roads (river, highway, air) and telecommunications (Zeng, 2015).
- Development of human capital  
In order to increase the efficiency and effectiveness of economic zones, it is necessary to strengthen links between universities and companies, such as providing dual education in order to attract talents.

## **3. PROS AND CONS OF THE FREE ECONOMIC ZONES**

Many authors classify the benefits of the free economic zones in two groups, static (direct) and dynamic (indirect), depending on the duration and type of effects they have. The static benefits are usually short-term and stem from the role of economic zones as instruments for boosting exports and investment in the businesses of the particular economy. Here are included: the direct opening of new jobs and generating part of the profits, the increase of export, the inflow of foreign capital in the form of foreign direct investment.

Researches in the area are not unanimous as to how much free economic zones contribute to the above-mentioned static benefits, although econometric literature often points to the positive effects of the economic zones on employment, investment and exports, saying that the effects are moderate and often short-term<sup>3</sup>. Dynamic benefits are represented by the long-term structural and developmental benefits that may arise from the zones, usually they are much more complex than static benefits, and their importance is largely manifested through their long-term contribution to economic development. Such benefits are: urban and regional development, synergetic effect between companies, promotion of economic openness, indirect creation of new job positions, structural transformations of the economy and transfer of technology and improvement of the skills of the workforce. For long-term benefits in the national economy, it is necessary to gradually replace the static benefits with dynamic. One additional aspect is the usage of the free economic zones as an instrument of the policies for balanced regional development, by creating zones in areas with high unemployment rates and low levels of economic development. Regarding the balanced regional development, the state should form zones in the underdeveloped regions in order to also stimulate demographic development. Free economic zones are also important for establishing relationships between foreign companies and local businesses for creating wider positive effects for the overall economy in which they operate. Strengthening the integration with the domestic entities, the positive effects of their operations are increased, with the ultimate goal of achieving a more balanced economic development, which is especially important for countries whose economies are concentrated in only a few traditional industries or in certain regions<sup>4</sup>. Although the benefits of forming free economic zones are numerous, there are some negative aspects that affect socio-economic life in the country. Some of the negative aspects of the free economic zones are as follows: large state expenditures for the development of the free economic zones, bringing domestic companies to a disadvantageous economic situation compared with the companies in the zones. It should be noted that when it comes to economic zones in developing countries, there is a danger of violation of the regulations in the area of labor relations by users in the free economic zones, which is possible the basic labor rights of the employees to be violated. For example, workers may have poor working conditions, as of violation of the legal fund of weekly working hours, violation of the safety and health at work regulations, insufficient environmental standards, etc. Another important thing to note is that in most of the developing countries, the main reason for the setting up a free economic zone is to overcome the problem of the high unemployment rate. Bearing in mind that every company that comes to invest in free zones signs a contract for a certain period of time, and it should be noted that this measure to reduce the unemployment rate, in a long term is not sustainable, because after the termination of the contract, the country will be facing again with the problem of high unemployment rate. Related to this is the opportunity cost of zone development. Does a focus on zone development divert scarce government resources from addressing other pressing needs such as education, health, or infrastructure?<sup>5</sup>. Question often asked in theory is whether the zones contribute to the modernization of industry and the development of the skills of the employees or, on the contrary, stimulate low skills and low technological group operations of employees?

#### **4. FREE ECONOMIC ZONES IN THE REPUBLIC OF SERBIA AND REPUBLIC OF NORTH MACEDONIA**

Free economic zones in the Republic of Serbia and the Republic of North Macedonia are primarily formed to overcome the post-war and post-conflict situation that both countries have

<sup>3</sup> National Bank of R.Macedonia (2017), Analysis of the effects of the export oriented companies in the national economy, p.2

<sup>4</sup> Ibid.

<sup>5</sup> FIAS, 2008, Special Economic Zones: Performance, Lessons learned and implications for zone development, The World Bank Group, p.42

had in the past two decades. The main objective of the free economic zones in this region is the attraction of foreign investments, as a result of the reorientation of economies towards the models of economic development that encourage exports. The change of the legal regulation that refers to the special economic zones in the legislation of both countries and the strengthening and development of the country's promotion and investment policy contributed to strengthening the business climate and attracting a lot of foreign investments, especially in the manufacturing sector. The geographical location of the Republic of Serbia and the Republic of North Macedonia is perhaps the main advantage of these two countries, which makes them interesting for investment. Namely, the Republic of Serbia and the Republic of North Macedonia are located in the central part of the Balkan Peninsula, and in the last several years, new infrastructure has been intensively built (new highways, reconstruction of railroads, etc.). The two corridors cross through the countries, Corridor 10 that connect countries with the countries of Western and Central Europe and Greece and Turkey. In Serbia is crossing the Corridor 7 (Danube river), which is connecting the country with the countries of the Black Sea Basin, and rest of Europe. The next advantage, which makes this region interesting for investment, is the low cost per employee. In the Republic of Serbia and the Republic of North Macedonia, gross salary costs are significantly lower than the costs per employee in the countries in EU. For example, the average gross salary in EU for 2018 is in the amount of 2.224 EUR<sup>6</sup>, but the average gross salary for 2018 in North Macedonia is 580 EUR<sup>7</sup> and in Serbia is also 580 EUR<sup>8</sup>. Also, despite the low costs per employee, these two countries offer numerous incentives for employing local workers, making them quite attractive for companies that need more workforce for doing business. It is interesting that these two countries were industrialized in the past, compared to ex-communist countries, and there is a traditional knowledge of many areas in which investors invest in zones. Republic of Serbia and Republic of North Macedonia have signed free trade agreements with major and important markets. North Macedonia is a member of the World Trade Organization, while both countries have signed Stabilization and Association Agreements with the EU and agreement with EFTA (OECD, 2017). The Republic of Serbia has signed a free trade agreement with Russia, where the customs rate is 0%, a free trade agreement with Turkey, Kazakhstan and Belarus. North Macedonia has signed a free trade agreement with Turkey and Ukraine. The two countries are signatories and the agreement with CEFTA, and also are signatories to various bilateral trade agreements with other countries in the region. Another advantage is the macroeconomic stability of countries, low inflation rate, which contributes to strengthening the confidence of foreign investors. The next advantage that makes them attractive for investing these two countries is the low corporate tax rate, compared to other European countries. The average corporate tax rate in EU for 2018 is 21.30%, and North Macedonia has a corporate tax rate of 10%, while Serbia has a corporate tax rate of 15%. Despite the low tax rates, countries still offer a wide range of tax incentives, which will be discussed in the text below.

#### **4.1. Free economic zones in the Republic of North Macedonia**

Republic of North Macedonia is interesting for investors because 4 of the free economic zones are located near Corridor 10 (E-75), and 3 of them are near Corridor 8 (E-65). Also, the zones are positioned near the border crossings with the neighboring countries. The free economic zones in the Republic of North Macedonia are regulated by the Law on Technological Industrial Development Zones<sup>9</sup>. The law is clear, concise and covers many of the incentives that are given to investors and because many of the incentives are systemized in one place, makes it easier for

<sup>6</sup> <https://www.reinisfischer.com/average-salary-european-union-2018>

<sup>7</sup> <http://www.stat.gov.mk/PrethodniSooptstenijaOblast.aspx?id=41>

<sup>8</sup> <http://www.cekos.rs/statistika/zarade-prose%C4%8Dne-bruto-zarade-u-srbiji/2018>

<sup>9</sup> Law on technological industrial development zones (Official Gazette of R.M. 14/07, 103/08, 130.08, 139/09, 155/10, 127/12, 41/14, 160/14, 72/15, 129/15, 173/15, 192/15, 30/16), Art. 2

investors to be informed. According to Article 2 of the Law<sup>10</sup>, the purpose of the law is to accelerate economic development by attracting foreign and domestic capital for the development of new technologies and their application in the national economy, increasing competitiveness and increasing employment. Hence, companies investing in R. North Macedonia are offered a number of tax and non-tax incentives that should facilitate their operations in the country. Tax and other exemptions and incentives offered to investors in the technological industrial zones in the Republic of North Macedonia are as follows:

- Exemption from the payment of corporate profit tax, which is 10%, in the next 10 years, calculated from the start of the activity in the zone. In the case of dividend distribution in the form of dividends, the tax rate is applicable<sup>11</sup>
- Exemption from payment of personal income tax on salaries based on salary of the employed person, which is 10-18%, for a period of ten years, calculated from the start of the activity in the zone, from the first month in which the user will start to pay salaries, regardless of the number of employees.
- Exemption from value added tax payment, in the amount of 18%, on the import of goods in technological industrial development zones, provided that the goods are not released for free circulation, that is, they are not intended for final consumption in North Macedonia.
- The user of the zone that carries out production activity and activities in the field of information technology, scientific and research activity and production based on new technologies with high environmental standards is exempted from the obligation to submit a guarantee as an instrument for securing the customs debt
- Other customs exemptions and incentives determined by the Customs Law
- Assistance in the amount of up to 50% of the eligible investment costs in case of general theoretical and practical knowledge improvement for the current or future jobs position in the company of the user and in the amount of up to 25% of the justified investment costs in the case of special training of the employees.
- The user of the zone, the tenants and the owners of the land in the technological industrial development zones are exempt from paying the fee for arranging the construction land (communal fee), in accordance with the provisions of the Law on Construction Land. The amount of this fee is determined by the municipality in which the TIDZ<sup>12</sup> is located.
- Possibility of a grant for construction of a facility in the amount up to 500.000 Euros in MKD equivalent, according to the criteria determined in the Law on Technological Industrial Development Zones.
- Free connection to electricity and water supply infrastructure, in the zones,
- Subsidizing 50% of the eligible investment costs or of the salary costs for newly created jobs for a period of two years,
- Shortened administrative procedure for establishing a company, the procedure lasts 4 hours.
- The Government of the Republic of North Macedonia can support the growth of capital investments and revenues by returning 10% of the investment costs in new machinery and equipment, or investments in buildings and land up to a maximum of € 1 million over a period of 5 years<sup>13</sup>.

There are 15 free economic zones in the Republic of Macedonia at the moment: Skopje 1, 2 and 3, Tetovo, Kicevo, Struga, Prilep, Gevgelija, Strumica, Radovish, Berovo, Stip, Vinica, Delchevo and Rankovce<sup>14</sup>.

<sup>10</sup> Ibid.

<sup>11</sup> Center for economic analysis CEA (2016), Benefits and costs of the foreign investments in TIDZ, p.17

<sup>12</sup> Technological Industrial Development Zone

<sup>13</sup> <http://fez.gov.mk/why-invest/?lang=MK>

<sup>14</sup> <http://fez.gov.mk/#zones>

The zones are 100% state owned, except for the zone in Tetovo where the Directorate for Technological Industrial Development Zones and the company NORMAK INVESTMENT GROUP signed an agreement on public private partnership, where it is determined that the company is the founder of the zone and responsible for its development. The activities related to the establishment, monitoring and development of the TIDZ are carried out by the Directorate for Technological Industrial Development Zones. This Directorate has the broadest powers related to deciding on the zones, signing contracts with investors on behalf of the Government, promoting and attracting founders and users of zones, adopting decisions for starting with work, cooperating with all other state authorities and making decisions for managing and developing zones.

#### *4.1.1. Effects and challenges for successful functioning of free economic zones in Republic of North Macedonia*

In the past few years, there has been an intensive increase in foreign investments in North Macedonia, which are expected to contribute to the economic development of North Macedonia and bring certain benefits. It is evident that users in the economic zones have enormous benefits from investing in North Macedonia, but did the free economic zones resulted with the desired effects on the development of the country? High amount of funds from the budget of North Macedonia, which are deducted from the citizens' revenues, are intended as a state aid on different grounds for subventions for the users in technological industrial development zones. The state waives the income that should be received as corporate tax, value added tax, personal income tax for the employed person, subvention the construction of new facilities, subventions for a certain percentage of salaries for employees. In this case, the local governments in which the zones are located, are prevented to perceive the real benefits of the development of those municipalities. It is also worrisome that the citizens cannot find the specific amounts of given state aid, because that those information are not published anywhere. In the only available documents referring to state aid, which are the decisions of the Commission for Protection of Competition and the reports submitted by to the Directorate for Technological Industrial Development Zones, the amounts of state aid are marked with the symbol XXX<sup>15</sup>. Despite the EU regulations for transparency of data on state aid and the existence of the State Aid Control Law, different budget lines are used by the country, which makes it particularly difficult to determine how much money so far has been spent on state aid granted to companies operating in free economic zones. The beneficiary companies in the TIDZ are financed through liabilities with related companies (mother companies). Loaning is between related parties, companies borrow from mother companies for which they pay interest in significant amounts, and they are generated as costs and also are reducing profits, but at the same time it is reflected as a reduced profit distribution to the mother company, that is, through a smaller calculated tax on profits<sup>16</sup>. North Macedonia is promoted to the foreign investors as a country with cheap workforce, and therefore the average net salaries paid to TIRZ companies are on or below the national average. This means that in the companies in the zones are not used highly-developed technologies, or are used on limited level and they do not require highly qualified staff that will be highly motivated and appropriately paid, but instead they are require manual employees. Hence, the effect of transfer of technology and knowledge from companies in the economic zones to the domestic companies is not achieved. It can be concluded that it is not in the best interest of Government the employees to be paid with higher salaries, because this also means a higher incentives for personal income tax, which is problematic especially after the adoption of progressive tax rate. Also, this effect of transferring the knowlage is questioned because of the fact that "major" sectors such as: the marketing sector, the research sector, sales,

<sup>15</sup> <https://respublica.edu.mk/blog/2016-03-18-09-59-33>

<sup>16</sup> Center for economic analysis CEA (2016), Benefits and costs of the foreign investments in TIDZ, p.6

development, etc. where innovation and monitoring of modern trends begin, are located in the company's main office, and not in the economic zones (CEA, 2016). At the same time, it is important to note that with the establishment of technological industrial development zones in the North Macedonia, the unemployment rate has significantly decreased, but the question that arises is whether it is cost-effective in the long term, that is, what happens with the investor after the expiration of 10 years in which he received various exemptions and incentives for employing workers? North Macedonia should find a way to keep these investors even after the termination of the ten-year period in order to make this investment viable. I believe that in the future, reforms in the policy for attracting foreign investments in TIDZs should be made in the direction in which healthy economic development will be achieved in the long term. It is necessary to find other non-tax incentives to attract foreign investments, rather than giving huge tax exemptions and reliefs, especially given the fact that the public debt of the country is still very high and that the taxes are the main and biggest income that flows into the state budget. In order to feel economic development and to ensure that local companies are not in a subordinate position, the country should make connections between local companies and companies in economic zones, where companies in the economic zones would cooperate with local businesses by using their services and supplying various goods from them, rather than importing them.

#### **4.2. FREE ZONES IN REPUBLIC OF SERBIA**

Serbia is located in the central part of the Balkan Peninsula and it allows Serbia to have a strategic position for connection with eastern and western, northern and southern Europe. The free economic zones in the Republic of Serbia are positioned near the big cities, near Corridors 7 and 10 and near the border crossings. The free economic zones in the Republic of Serbia are regulated by the Law on Free Zones<sup>17</sup> and this law determines the conditions for determining the areas and operation of the free zones, the activities that will be performed, the conditions for termination of operation of the free zones, as well as the establishment, the competencies and the legal status of the Administration for Free Zones. The Law on Free Zones only frames the tax and customs exemptions and reliefs, giving the possibility to regulate it with other laws that refer to the particular matter. Unlike R. North Macedonia where the zones are with 100% state ownership (with exception of the zone in Tetovo), in Serbia the zones are formed and managed through concluded public-private partnership contracts between the local government and the investors. Likewise, local governments have been given an independent opportunity to determine what kind of benefits will enable users of the zones. In this sense are covered - relief from paying local taxes, fees and different fees for which decides the local government. Free zones users are also offered the following logistics services at preferential prices: organization of transport, transshipment, loading, forwarding services, agency services, banking services, etc.<sup>18</sup>. Tax and customs exemptions and incentives, enjoyed by the users in the free economic zones in the Republic of Serbia are as follows:

- Customs duties and other import duties (raw materials, equipment, building materials) are not paid for the import of goods intended for carrying out the activity and construction of facilities in the zone<sup>19</sup>. Exports of goods and services from the zone and imports of goods and services into the zone shall be unrestricted and shall not be subject to quantitative restrictions<sup>20</sup>.
- VAT is not paid for the trade of goods that entered into the free zone, transport and other services that are directly related to the entry and circulation of goods in the free zone, which

<sup>17</sup> Law on free zones, Official Gazette of R.S., no. 62/2006

<sup>18</sup> Free Zone-Benefits and Prospects of Business, Regional Chamber of Commerce Panchevo, p.4

<sup>19</sup> Law on free zones, Official Gazette of R.S., no. 62/2006, art.19

<sup>20</sup> Ibid. Art.16

is carried out a foreign person who has concluded a contract with the taxpayer of VAT free-zone users to incorporate these goods into goods intended for dispatches abroad<sup>21</sup>

- Exemption from payment of VAT on the sale of goods and services in the free zone
- Exemption from payment of VAT on the sale of goods between users of two free zones<sup>22</sup>
- The release of production VAT payers to the consumption of energy products
- For investors who employ more than 100 workers and invest more than 8.5 million euros (1 billion RSD), tax exemption from corporate income tax for a period of 10 years is available<sup>23</sup>.
- Financial support by the Government of the Republic of Serbia for projects Brownfield and Greenfield in manufacturing and services sector.

On the basis of the Regulation on the conditions and ways of attracting foreign investments, the following types of grants can be awarded<sup>24</sup>:

- Grants for justified expenses of gross earnings of 20-40% (depending on the level of development of the local government), or maximum amounts from 3.000 to 7.000 EUR for each new job position
- Possibility to increase the amount of non-refundable funds in the amount of 10-30% of the amount of the eligible costs, depending on the level of development of the local government
- Additional grant for work intensive projects of 10 - 20% of the amount of gross salary costs for opening 200 to 1000 new jobs positions
- The funds can be allocated for investment projects in the manufacturing sector, where the eligible costs for investing tangible and intangible assets amount to 100,000 Euros - 500,000 Euros, which enables an appropriate opening of 10-50 new jobs in the units of local government. The condition for obtaining the funds is that the direct investment is held on the same site for a period of at least 5 years for large company or for a period of at least 3 years for small and medium companies, and for the same period not to reduce the achieved number of employees.

In the Republic of Serbia there are currently 14 free zones: Pirot, Subotica, Novi Sad, Zrenjanin, Sabac, FAS Free zone Kragujevac, Uzice, Smederevo, Krusevac, Svilajnac, Apatin, Vranje, Priboj and Belgrade. A competent body for performing all activities related to the economic zones in the Republic of Serbia is the Free Zones Administration, which was established as a body within the Ministry of Finance. The Zones Administration has wide responsibilities related to: implementation of the national strategy for development of zones, preparation of legal regulations for zones, providing expert assistance to investors, giving opinions on requests for granting consent for determining areas of zones, reviewing reports for the work of the zones and proposes their adoption, participates in the promotion of zones.

#### *4.2.1. Effects and challenges for successful operating of economic zones in the Republic of Serbia*

In the last decade in the Serbia were many investments in the free zones and a reduction of the unemployment rate as a result of the investments of the companies in the free economic zones. This is a proof that Serbia is becoming a more attractive country for investors, and confirmation of this is also the fact that the Free Zone Pirot, according of the rang list of the magazine FDI in

<sup>21</sup> Law on valued added tax (Official Gazette of RS no. 84/2004, 86/2004, 61/2005, 61/2007, 93/2012, 108/2013, 6/2014, 68/2014, 142/2014, 5/2015, 83/2015, 5/2016, 108/2016, 7/2017, 113/2017, 13/2018 i 30/2018), art.24, p.5a

<sup>22</sup> Chamber of Commerce of Serbia, 2013, Free zones Serbia-Benefits and perspectives of the free zones

<sup>23</sup> <http://www.usz.gov.rs/files/publikacije/Zasto%20investirati%20u%20Srbiji.pdf>

<sup>24</sup> Regulation on the conditions and ways of attracting foreign investments(Official Gazette of RS no. 01/2019)

2018 has been declared as a leading zone in Europe and the third zone in the world<sup>25</sup>. Foreign investors often call Serbia a door to the Balkans and a bridge to other markets. Serbia is quite interesting for foreign investors because across Serbia passes Corridor 10, the Salzburg-Thessaloniki highway, as well as corridor 7, along the Rhine-Main-Danube canal linking the North and Black Sea. In this way, Serbia connects with European cities and countries of the Middle East. In Serbia, there are eight ports on the Danube and one on the Sava and Tisa, which provide the possibility of safe and inexpensive river transport of goods, raw materials and equipment. Although in the last few years it has invested heavily in road and rail road networks, the infrastructure can be characterized as Serbia's competitive weakness exclusively due to equipment obsolescence and poor maintenance. By improving the overall infrastructure, Serbia will surely become the country with the most investments in the free zones in this region. It is positive that there is a wide range of different incentives in the Republic of Serbia, so investors have a lot of opportunities. For foreign investors, an admissible package of benefits must be created, in the form of tax exemptions and incentives, various stimulus packages, low corruption rates, and mandatory shortening and simplification of administrative procedures. It should also be noted that many of the benefits that investors receive in the economic zones can be obtained by local companies outside the zone, in this way a balance is achieved between local companies and users in the zones. Same as North Macedonia, Serbia needs to reform the strategy for development of the economic zones, in order to find a way to keep the investors in the country and after the termination of the period in which they are enjoying benefits.

## 5. CONCLUSION

Due to the complexity of the concept of free economic zones, it should be adequately created and appropriately implemented in the economic situation of the country. In the North Macedonia and Serbia, there are successful examples of companies operating in the free economic zones and contributing to the increasing of the economic development of the countries and the reduction of the unemployment rate. Regarding the legal regulations, it is recommended that countries revise the regulations that refer to labor relations, taxes, customs, environmental protection, anti-corruption regulations, in order to build a more stable and favorable business environment. Also, it is recommended for the countries to provide ways for stimulating foreign investments in the Strategies for Development of the free economic zones, but those incentives should be in order to improve the economic situation in the long term. Referring to human resources, it is necessary for states to take measures for their improvement, perhaps through the formation of dual education, by strengthening the links with universities and companies, in order to attract talents and to transfer the knowledge from investors in the zones to the local companies. In order to achieve a balanced development throughout the country, it is necessary for countries to provide incentives for local companies, and not only for investors in the zones. This is particularly noticeable in the case of North Macedonia, where investors investing in the zones have a wide range of stimulations, and local companies have not been given such a possibility. In Serbia, investors in the zones are enjoying higher benefits, but certain incentives are also given to local companies, which diminishes the gap between local companies and companies investing in the zones. Because of the characteristics of the countries, services (IT, tourism, etc.) cannot influence GDP growth on enough level. Also, agriculture has important part in the both countries GDPs, but it is not enough to gain the growth. So, the solution for both of countries reindustrialization of the economies. It is also important to strengthen the regional development among countries. Countries of the same region should not be monitor each other for the given incentives to investors in the zones, since in this case the benefits are enjoyed only by investors, and by the economies.

<sup>25</sup> <http://www.usz.gov.rs/lat/aktuelno.php#85>

The transport and trade links between the countries in the region are one of the prerequisites for the balanced development of countries in the region.

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## **CORRELATES OF ENTREPRENEURSHIP EDUCATION AND EMPLOYMENT GENERATION**

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### **ABSTRACT**

*Unemployment is a major macro-economic challenge confronting Nigeria. Entrepreneurship Education has been argued by scholars as a viable approach that is capable of reducing unemployment. This study investigated the role of entrepreneurship education on employment generation in Nigeria. The population of this study comprised of 60 incubates in Lagos State National Board of Technological Beneficiaries (NBTI). To determine the sample size, a complete enumeration survey was adopted. The sample size for this research study was 60 respondents (incubatees in Lagos State). Yamane formula was employed to determine the sample size. The sampling validity was used to access the validity of the data. The study made use of statistical tools which include: analysis of variance (ANOVA) and correlation efficient in testing hypotheses where applicable. The responds gotten from the questionnaire was sorted, coded and the Statistical Packages for Social Sciences (SPSS) Version 17.0 was used for the analysis. This study found that Business Incubation has a positive significant on Entrepreneurship job creation. It was shown that knowledge acquires from Business Incubation centers significantly enhanced entrepreneurship performance and increased Entrepreneurship job creation. Moreover, it also found that Entrepreneurship Education has a positive significant on Self-Employment initiatives. This revealed that Entrepreneurship Education significantly enhances Self-Employment initiatives. The study recommended that there is a need to establish more Business incubators across different states in Nigeria. This will help to duplicate the positive results of incubation programmes in different parts of the country, thereby enhancing entrepreneur job creation which will eradicate unemployment.*

**Keywords:** *Entrepreneurship Education, Employment Generation, Business incubators, Self-Employment initiatives*

### **1. INTRODUCTION**

Entrepreneurship is a notion that is widely used. This implies that the definition one chooses reflects a particular perspective or emphasis of the research at hand (Anam, Iba & Aregbe, 2014). Typically definitions vary between economic and management perspectives. The entrepreneur is a person who initiates all of these factors of entrepreneurship (Lin et al, 2011). From the management perspective, Movis et al, (2013) sees entrepreneurship as a way of managing; aiming at the search of opportunities without taking the resources currently available into account. Entrepreneurs first identify opportunities and then collect the necessary resources. This research will focus on the management perspective for the following reason: business incubation could help entrepreneurs by enabling them to search, identify and seize opportunities. Business incubation also focuses on showing entrepreneurs how to provide for their own supplies; by seizing opportunities and then starting to acquire the needed resources. The notion of entrepreneurship will be regarded as a research domain instead of a phenomenon. Booth-Jones (2012) argued that one needs to be able to study entrepreneurship as it happens,

before the outcome is known; one should not only study what has been done but also what could be done. The notion of entrepreneurship will be approached by developing normative theory and to do so the definition of entrepreneurship presented by Somsuk et al. (2012) will be used. Somsuk et al. (2012) defined the field of entrepreneurship as a conceptual domain that helps researchers to recognize the relationship between necessary but not sufficient factors. Hence there is a need for programmes targeted at providing these young entrepreneurs or start-up businesses with the relevant resources in order to help them survive and succeed. According to Lesakova (2012), entrepreneurship can be boosted through the incubation of start-up businesses. Like many other developing countries, Nigeria embraces entrepreneurship as a vehicle for employment creation and poverty alleviation (Adebayo & Kolawole, 2013; Oshewole, 2010; Emeh, 2012; Naude, 2011). Even among scholars, there is a general consensus that entrepreneurship education is pivotal to economic growth in both developing and developed countries (James, 2002; Mani, 2013; Akudolu, 2010; Lee, Chang & Lim, 2005; Mitra et al, 2011).

#### Research Objectives

1. To examine the significant relationship between Business Incubation and entrepreneurship job creation.
2. To determine the significant effect between Entrepreneurship education and self-employment initiatives.

#### Research Hypothesis

- Hypothesis One: There exists no significant relationship between Business Incubation and Entrepreneurship job creation
- Hypothesis Two: There exists no significant effect between Entrepreneurship education and Self-Employment initiatives

## 2. LITERATURE REVIEW

### 2.1. The concept of Entrepreneurship

There is no consensus on the correct definition of entrepreneurship among various scholars (Carre & Thurik, 2010; Garrett, 2008; Akhuemoukhan, Raimi & Sofoluwe, 2013). However, this paper will present a number of definitions offered by different scholars in order to point out certain characteristic features of entrepreneurship. To begin with, it may be helpful to define entrepreneurship by defining the person who carries out the role of entrepreneurship, that is, the entrepreneur. According to Condradie (2013), an entrepreneur is a decision-maker whose role arises from being alert to previously unnoticed opportunities. He or she is that person who creates an organization in order to pursue a perceived opportunity (GEM, 2012). From these definitions, it can be deduced that an entrepreneur must have certain qualities. The first is the ability to see opportunities. The second is the willingness to exploit such opportunities, and the third is the capability (knowledge, skills etc) to exploit the perceived opportunities through business formation. The journey of an entrepreneur is encapsulated in the word, entrepreneurship, which comes from the French word “entreprendre”, meaning to undertake something or to do something (Mas-verdu et al., 2015). According to Akpomi (2009), entrepreneurship can be defined as the process of uncovering and developing an opportunity so as to create value through innovation, either through the formation of a new business or within an already existing company. It is the pursuit of market opportunities which have been discovered, evaluated and exploited in order to create innovative goods and services leading to new venture creation (Kumar, 2010). This definition brings to the table the various aspect of entrepreneurship. The first of these is the leadership dimension or proactivity. An entrepreneur must set his/herself apart as a leader by identifying ‘hidden’ opportunities and channeling

his/her will power and resources towards creating value from such opportunities. It also highlights the fact that one does not need to start an entirely new venture to be an entrepreneur. This is because an entrepreneur can still operate within an already existing company by, for example, altering the manner in which business is done in that company (Adejimola & Olufunmilayo, 2009; Oviawe, 2010).

## **2.2. Boosting Entrepreneurship through Entrepreneurship Education and Training**

Dawson & Henley (2012) revealed that, through entrepreneurship education, entrepreneurship can be taught, or at least enhanced. This position is corroborated by Kumar (2010) who notes that entrepreneurial ability is neither mystical nor magical but rather something that could be learned. A country with qualitative entrepreneurial education will likely produce successful entrepreneurs. The terms 'entrepreneurship education' and 'entrepreneurship training' are generally used synonymously (Booth-Jones, 2012; Lalkaka, 2003). It includes various programmes targeted at changing the world view of learners, from job seekers to job creators. Amongst other things, entrepreneurship education seeks to promote creativity, risk-taking, leadership, team-spirit, autonomy, sense of initiative, self-employment, self-confidence and innovation; it is a combination of all these features which set entrepreneurship education apart from general economic or business studies (Lee, Chang & Lim, 2005; Matuluko, 2015). Unlike ordinary business management, entrepreneurship involves elements of risk taking, creativity and innovation (Booth-Jones, 2012).

## **2.3. Entrepreneurship and Employment Generation in Nigeria**

Nigeria is considered an entrepreneurial nation (Nwabueze & Ozioko, 2011; Salami, 2011). This means that out of every 100 Nigerians (ages 18 to 64), 35 are either an owner-manager of a new business or a nascent entrepreneur. The report also revealed that 15.7% Nigerians (ages 18 to 64) own and manage established businesses, while 44% are latent entrepreneurs who intend to start their own business in three years' time. Entrepreneurship has a strong link with Small and Medium Enterprises (SMEs) which is said to be the main components of many economies (Adebayo & Kolawole, 2013). According to Ukpong (2013), the Nigerian SMEs sub-sector has been experiencing major expansion, especially since the mid-1980s, consequent upon prolonged economic recession which forced numerous large enterprises to lay off many of their work-force. Recently, the Federal Government formally adopted SMEs as the engine of the nation's economic recovery, and for re-engineering for national transformation (Nwekeaku, 2013). These small firms make both economic and social contributions to the country's development. They stimulate indigenous entrepreneurship and technology, transform traditional industry, enhance the utilization of local resources, enhance diversification of the economy, create jobs, and help with wealth redistribution (Salami, 2011). Thus, the role of entrepreneurship and SMEs in the social and economic life of Nigeria has been conspicuous, especially in the Agricultural sector which employs over 60% of the nation's workforce (Akudolu, 2010). As opined by Adejimola & Olufunmilayo (2009), Nigeria's hope of becoming one of the twenty biggest economies by 2020 is only a mirage without considerable efforts to enhance the entrepreneurial skills of the its youth and adults. Furthermore, considering that in Nigeria, the rate of population growth oversteps employment growth, there is an urgent need to promote entrepreneurship as a vehicle of employment creation and poverty alleviation (Onuwa, 2016). As a way of dealing with the country's macro-economic challenge of unemployment and its concomitant socioeconomic problems, the Nigerian Government has implemented numerous programmes to enhance entrepreneurship and small scale business development in the country. In order to improve access to financial resources for entrepreneurship development, the government established numerous programmes. In June, 2011, the CBN established the Small and Medium Enterprises Equity Investment Scheme (SMEEIS) as a way of liberalizing

access to funds for SMEs through all the commercial banks (Salami, 2011). The Agency provides support and information services to business operators in the country and helps them to gain easy access to funding. Other schemes designed to aid entrepreneurship and support small businesses include: Bank of Industry (BOI), Bank of Agriculture (BOA), Corporate Institution Initiative, Enterprise Development Services (EDS) and Microfinance Banks (NBS, 2014; Adebayo & Kolawole, 2013). However, although the SMEs were made the building blocks of Nigeria's economy, the nation still lacked trained entrepreneurs who could set up and successfully run these businesses. Thus, the government decided to invest in entrepreneurship education which will inculcate entrepreneurial knowledge and skills in students, thereby producing well rounded graduates who could become successful job creators rather than job seekers. In 2006, the Federal Government directed all Higher Education Institutions (HEIs) in the country to include entrepreneurship education as part of their curricula as a way of boosting entrepreneurship engagement among Nigerian graduates (Nwekeaku, 2013). Despite these multipronged interventions, entrepreneurship development in Nigeria is still manacled by numerous challenges. Unlike developed economies, Nigeria and other developing economies suffer from poor institutional structures which are required for opportunity creation and realization (Akpomu, 2009). Furthermore, as noted by Anam, Iba & Aregbe (2014), entrepreneurial activities and productivity in Nigeria are hampered by poor infrastructure, political instability as well as an unstable and unhealthy macro-economic atmosphere. Therefore, the government and all stakeholders need to invest more into providing a conducive entrepreneurial environment in the country through investment in infrastructural development, relevant monetary and fiscal policies and building adequate institutional capabilities.

#### **2.4. Challenges of Entrepreneurship Education in Nigeria**

The first of these constraints is poor curriculum design. According to Akudolu (2010), the curricula used by the Nigerian tertiary institutions are obsolete when viewed from the perspective of the modern global labor market. Thus the orientation and content of the program followed by students do not produce the graduate attributes needed for the current labour market. Adebayo & Kolawole (2013) also observed that the Nigerian educational system produces mostly general knowledge so that relevant skills in the technological, social, economic and political areas, are lacking.. Another challenge crippling the effectiveness of entrepreneurship education in Nigeria is lack of funding. Ukpong. (2013) observed that due to widespread inequality in Nigeria, many aspiring entrepreneurs lack the required capital to start up their ventures, and assessing bank loans is challenging due to strident conditions. Oshewole (2010) asserted that young entrepreneurs in Nigeria suffer because of the inaccessibility of soft loans and funding. Furthermore, most Nigerian universities suffer from lack of sufficient and skilled manpower. It has been observed that Nigerian universities do not have adequate and high level manpower required for effective teaching and learning of entrepreneurship education (Nwekeaku, 2013; Salami, 2011). Moreover, Nwekeaku (2013) asserts that the available teachers for the entrepreneurship programme were drafted from pre-existing faculties and do have not have additional skills to cope with the challenges of the new curriculum. This is corroborated by Nwabueze & Ozioko (2011) who noted that there is a dearth of professionals and academic manpower (both in quantity and quality), that are capable of facilitating the entrepreneurship programme and translating it into reality. Another major factor be devilling entrepreneurship education in Nigeria is inadequate infrastructure. As observed by Nwekeaku (2013), the poor state of infrastructure in Nigeria is worrisome and as such, cannot support the newly introduced entrepreneurship education. The place of relevant infrastructure in entrepreneurship education cannot be overemphasized. Even with the best entrepreneurial intentions, the students may likely succumb to wage-employment due to the hurdles of infrastructural deficit. For example, somebody who wants to start an IT business may be

severely constrained by the erratic power supply in Nigeria. Fortunately, many of these challenges can be minimized through business incubation so that integrating incubation into entrepreneurship education in tertiary institutions may yield better dividends.

## **2.5. Business Incubation**

The literature provides many definitions on business incubation; over the years the focus has shifted somewhat from facilities and administrative services to actual business support. Grimaldi & Grandi (2005) presents an overview of incubation literature development and shows that the focus has shifted from incubator development studies in the early eighties, to incubator configuration and incubatee development studies in the late eighties. Chandra & Fealey. (2009) reviewed literature on business incubators and business incubation and formed a definition of business incubation. This definition is supplemented by Lalkaka (2003) who describes the main characteristics of a business incubator. Following is a list of business incubation objectives by EU (2012). This combined with Elmasori (2014) view of why a business incubator exists and what its main goals are and a list of what is needed according to the European Commission (2002) to set up and operate a business incubator. The findings of the European Commission (2002) are considered valuable, because the European Commission (2002) developed a framework of characteristics and consequently tested this at business incubators in twelve countries. This resulted in conclusions drawn from data of 77 incubators and 71 firms. Therefore these findings are used to further analyze the characteristics of business incubators. Hackett's & Dilts (2004) definition contains the basic elements of business incubation. Firstly, the existence of a shared office space facility; business incubators are situated in buildings in which numerous enterprises can be placed. The advantage of this construction over a regular office is the fact that the facility is shared; economies of scale and shared knowledge and facilities result; for instance the incubator management decides to provide the tenants with a shared internet contract that result in lower monthly costs for each tenant compared to purchasing an internet contract individually. Secondly, providing incubatees with a strategic system of business assistance with which tenants are enabled to develop themselves on various aspects of having a business. Thirdly, the business incubator system ensures the proper use of resources in order for enterprises to be able to develop themselves on the one side and to reduce their risk of failure on the other side; in short, tenants are not on their own in the difficult initial phase of their startup. Hackett & Dilts (2004) sees the concept of a business incubator as a network of individuals and organizations that are interdependent. In order to be able to comprehend the emergence of such a network, one has to know the characteristics and functions of a business incubator. The second definition of a business incubator shows several of those characteristics. In addition, the objectives and goals of a business incubator show what could be accomplished with a business incubator while 'implementation' shows how its characteristics should be developed and used (McAdams & McAdams, 2008; Elmasori, 2014).

## **2.6. Incubator Management and Networks**

Key to optimal communication according to the literature is the incubator manager. The incubator manager should be the first person to address problems to, ask questions and in general to just have a chat with on how things are going (Hernandez & Cara, 2016). A manager as a counselor provides direct assistance while a manager as an intermediary provides assistance through networking. Isaac et al, (2007) sees the entrepreneur as a consumer producer of the outcome and stresses the importance of being properly prepared to utilize the advice provided. However, Rice mentions a gap in knowledge between the incubator manager and the tenants that tends to exist in many business incubators. Therefore he suggests enabling the flow of knowledge from the manager to the tenant which was reported by Rouach et al, (2004).

An important aspect of a successful business incubator is the use of its network. Herrington et al. (2011) stresses that extensive powerful business connections enable tenants to create value; incubation is seen as a process. Furthermore, because incubating firms are new, have weak legitimacy and have not many developed bargaining structures, companies are more likely to use the opportunities the network of the incubator offers. Following this, companies that join business incubators just for the advantage of cost reduction prevent a vibrant network from emerging and in addition a chance to overcome the difficulties of their own newness. Kumar (2010) argues that human capital; talent, experience and motivation are critical resources in new firm growth and that these factors influence the value of the support entrepreneurs receive from a business incubator. Lesakova (2012) found that there appeared to be a positive relationship between managerial experience, formal education, motivation in terms of commitment and business success. Also, organizational factors such as firm age, size, resources and strategies are positively related to business success. Regarding the influence of business incubator services, Emeh (2012) found that they positively influenced firm mortality risk reduction but a positive influence on firm growth was not identified. In conclusion Hackett & Dilts (2004) case study showed that human capital and organizational factors both have a proven positive effect on business success in terms of firm growth. Business incubation mostly influences business success for instance through a reduced mortality risk. The consequence of this situation may be that relatively inefficient firms may occupy a place in the market because they enjoy the benefits of a business incubator, while potentially more efficient firms that are not part of the business incubator are pushed out of the market. Hackett & Dilts (2004) argues that a solution would be for the incubator manager to conduct a more proactive role and monitor incubator firms more intensively. This way business incubation programs would become a real asset to business success next to human capital.

### 3. RESEARCH METHODS

The population of this study comprised of 60 incubatees in Lagos State National Board of Technological Beneficiaries (NBTI). A total of 27 technology incubation centres are spread across the six geo-political zones of Nigeria, but for the purpose of this study, Lagos State National Board of Technological Beneficiaries (NBTI) will be selected. To determine the sample size for this research study, a complete enumeration survey would be adopted, where data would be collected for each and every unit as the case may be from the population or universe which is the complete set of items which are of interest in any particular situation (Creswell, 2009). Therefore, the sample size for this research study would be 60 respondents (incubatees in Lagos State). Yamane formula will be employ to determine the sample size. This formula is concerned with applying a normal approximation with a confidence level of 95% and a limit of tolerance level (error level) of 5%.

To this extent the sample size is determined by  $n = \frac{N}{1 + Ne^2}$

Where: n = the sample size

N = population

e = the limit of tolerance

Therefore,  $n = \frac{76}{1+76(0.05)^2} = \frac{76}{1 + 76 (0.0025)} = \frac{76}{1 + 0.19} = \frac{76}{1.19} = 60 \text{ respondents}$

The sampling validity will be used to access the validity of the data. The study made use of statistical tools which include: analysis of variance (ANOVA) and correlation efficient in testing hypotheses where applicable (Easterby-Smith, Thorpe, Jackson, 2011).

The responds gotten from the questionnaire was sorted, coded and the Statistical Packages for Social Sciences (SPSS) Version 17.0 was used for the analysis.

#### 4. PRESENTATION OF DATA

##### 4.1. Data analysis and Hypothesis Testing

*Table 1: Distribution of respondents and response rate*

Respondents Occupation	Questionnaire administered (sampled)	Percentage of total response (%)
Top Level	47	83.9
Middle Level	9	16.1
Lower Level	-	-
Total	56	100.0
Gender/Category	Questionnaire administered (sampled)	Percentage of total response (%)
Male	30	53.57
Female	26	46.43
No of Returned	56	93.3%
No of Not Returned	4	6.67%
Total no of Questionnaires	60	100

*Source: Field Survey 2018*

*Table 2: The Descriptive statistics of Entrepreneurship Education and Employment Generation*

Responses	Total (N)	Mean
<b>Business Incubation and Entrepreneurship job creation</b>		
Participants gets the training required from the Business incubation program in order to enhance their capabilities which assist in job creation	56	3.87
Business incubation Centers have a positive impact on entrepreneurship job creation	56	3.93
Entrepreneurs gets the necessary knowledge from Business Incubation centers	56	3.98
Business incubation is a means of providing adequate support to newly founded firms, thereby helping to boost their survival rate and growth prospects.	56	3.87
The business incubator has helped firm to facilitate technically and competence personnel to handle job task.	56	3.89
<b>Entrepreneurship Education and Self- Employment initiatives</b>	<b>Total</b>	<b>Mean</b>
Entrepreneurship education can give youth self-employment initiatives to start up new business	56	3.88
Entrepreneurship education is vital for the growth of a nation	56	3.98
Government invests in entrepreneurship education which inculcates entrepreneurial knowledge and skills in students, thereby producing well rounded graduates who could become successful job creators rather than job seekers.	56	3.99
Entrepreneurship education assists entrepreneurs to generate entrepreneurial capability and interest which helps them in the business of their choice.	56	3.86
Challenges of Entrepreneurship education can be minimized through business incubation so that integrating incubation into entrepreneurship education in tertiary institutions may yield better dividends.	56	3.99
Entrepreneurship education enhances self-employment initiatives by acquiring new knowledge and skills.	56	3.89

*Source: Field Survey 2018*

## 4.2. Test of Hypotheses

### 4.2.1. Hypothesis One

Ho: There exists no significant relationship between Business Incubation and Entrepreneurship job creation

Hi: There exists a significant relationship between Business Incubation and Entrepreneurship job creation

*Table 3: Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.366 <sup>a</sup>	.134	.118	2.56273	2.170

*a. Predictors: (Constant), Business Incubation*

*b. Dependent Variable: Entrepreneurship job creation*

*Table 4: ANOVA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	54.707	1	54.707	8.330	.000 <sup>a</sup>
	Residual	354.650	54	6.568		
	Total	409.357	55			

*a. Predictors: (Constant), Business Incubation*

*b. Dependent Variable: Entrepreneurship job creation*

#### 4.2.1.1. Interpretation of Results

The result from the model summary table revealed that the extent to which the variance in Entrepreneurship job creation can be explained by the Business Incubation is 13.4% i.e. (R square = 0.134). The ANOVA table shows the Fcal 8.330 at 0.0001 significance level. The table shows that knowledge acquires from Business Incubation centers significantly assists entrepreneurship performance and increases Entrepreneurship job creation.

*Table 5: Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.862	1.175		4.136	.000
	Business Incubation	.512	.143	.366	2.886	.000

*a. Dependent Variable: Entrepreneurship job creation*

The coefficient table above shows that the simple model that expresses how Business Incubation centers enhances entrepreneurial performance and increases Entrepreneurship job creation. The model is shown mathematically as follows:  $Y=a+bx$  where y is increase in Entrepreneurship job creation and x is Business Incubation, a is a constant factor and b is the value of coefficient. From this table therefore, Increase in Entrepreneurship job creation = 4.862 + 0.512 Business Incubation. This means that for every 100% increase in Entrepreneurship job creation, Business Incubation contributed 51.2%.

#### 4.2.1.2. Decision

The significance level below 0.01 implies that a statistical confidence of above 99%. This implies that Business Incubation has a positive significant on Entrepreneurship job creation.

Thus, the decision would be to reject null hypothesis (Ho), and accept the alternative hypothesis (H1).

#### 4.2.2. Hypothesis Two

Ho: There exists no significant effect between Entrepreneurship Education and Self-Employment initiatives

Hi: There exists a significant effect between Entrepreneurship Education and Self-Employment initiatives

*Table 6: Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.518 <sup>a</sup>	.269	.255	2.87351	2.207

*a. Predictors: (Constant), Entrepreneurship Education*

*b. Dependent Variable: Self-Employment Initiatives*

*Table 7: ANOVA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	163.673	1	163.673	19.822	.000 <sup>a</sup>
	Residual	445.880	54	8.257		
	Total	609.554	55			

*a. Predictors: (Constant), Entrepreneurship Education*

*b. Dependent Variable: Self-Employment Initiatives*

##### 4.2.2.1. Interpretation of Results

The result from the model summary table revealed that the extent to which the variance in Self-Employment initiatives can be explained by Entrepreneurship Education is 26.9% i.e. (R square = 0.269). The ANOVA table shows the Fcal 19.822 at 0.0001 significance level. The table shows that Entrepreneurship Education significantly enhances Self-Employment initiatives.

*Table 8: Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.848	1.307		2.179	.000
	Entrepreneurship Education	.736	.165	.518	4.452	.000

*a. Dependent Variable: Self-Employment initiatives*

The coefficient table above shows that the simple model that expresses how Entrepreneurship Education significantly enhances Self-Employment initiatives. The model is shown mathematically as follows:  $Y = a + bx$  where y is Self-Employment initiatives and x is Entrepreneurship Education, a is a constant factor and b is the value of coefficient. From this table therefore, Self-Employment initiatives = 2.848 + 0.736 Entrepreneurship Education. This means that for every 100% Self-Employment initiatives, Entrepreneurship Education contributed 73.6%.

#### 4.2.2.2. *Decision*

The significance level below 0.01 implies that a statistical confidence of above 99%. This implies that Entrepreneurship Education has a positive significant on Self-Employment initiatives. Thus, the decision would be to reject null hypothesis ( $H_0$ ), and accept the alternative hypothesis ( $H_1$ )

### 5. DISCUSSION

The results of findings of hypothesis one show that Business Incubation is 13.4% i.e. ( $R^2 = 0.134$ ). Shows the  $F_{cal}$  8.330 at 0.0001 significance level which indicates that knowledge acquired from Business Incubation centers significantly assists entrepreneurship performance and increases Entrepreneurship job creation. For any country which is serious about boosting economic growth, reducing unemployment and alleviating poverty; adequate emphasis should be placed on enhancing its entrepreneurial activities and productive capacities through relevant policies and programmes. The findings of this study is in line with the findings of Kumar (2010) that proved that human capital; talent and experience acquired from business incubations are critical resources in new firm growth and that these factors influence the value of the support entrepreneurs receive from a business incubator. Kumar (2010) found that there appeared to be a positive relationship between Business Incubation and Entrepreneurship job creation. This study has shown that, business incubation expands the opportunities that the Nigerian youth have by providing them with requisite entrepreneurial skills, knowledge and resources which give them an alternative to job seeking. With this capability set in place, an aspiring entrepreneur can be said to have the effective freedom or opportunity to start and run a successful business venture. Moreover, the findings of hypothesis two revealed that entrepreneurship education has a positive significant on self-employment initiatives. Entrepreneurship Education is 26.9% ( $R^2 = 0.269$ ). The  $F_{cal}$  19.822 at 0.0001 significance level, this proves that entrepreneurship education significantly enhances self-employment initiatives. The study has shown that entrepreneurship education seeks to promote creativity, risk-taking, leadership, team-spirit, autonomy, sense of initiative, self-employment, self-confidence and innovation; it is a combination of all these features which set entrepreneurship education apart from general economic or business studies.

### 6. CONCLUSION

Unemployment is a major macro-economic challenge confronting Nigeria. The study has revealed that Entrepreneurship Education has been considered a viable approach that is capable of reducing unemployment. The start-ups ecosystem suffers severely from lack of infrastructure and other resources needed for entrepreneurs. This paper has investigated the role of business incubators and entrepreneurship education in Nigeria. Due to widespread inequality in Nigeria, many aspiring entrepreneurs lack the required capital to start up their ventures, and assessing bank loans is challenging due to strident conditions. The study also confirmed from respondents that young entrepreneurs in Nigeria suffer because of the inaccessibility of soft loans and funding. It has been observed that Business Incubation centers do not have adequate and high level manpower required for effective teaching and learning of entrepreneurship education. The available teachers for the entrepreneurship programme were drafted from pre-existing faculties and do have not have additional skills to cope with the challenges of the new curriculum. In Nigeria, the rate of population growth oversteps employment growth; there is an urgent need to promote entrepreneurship as a vehicle of employment creation and poverty reduction. This study concludes that many of these challenges can be minimized through business incubation so that integrating incubation into entrepreneurship education in tertiary institutions may yield better dividends.

### 6.1. Recommendations

1. As a way of dealing with the country's macro-economic challenge of unemployment and its concomitant socioeconomic problems, the Nigerian Government must implement numerous programmes to enhance entrepreneurship and small scale business development in the country.
2. The SMEs were made the building blocks of Nigeria's economy, the nation still lacked trained entrepreneurs who could set up and successfully run these businesses. Thus, the government must invest in entrepreneurship education which will inculcate entrepreneurial knowledge and skills in students, thereby producing well rounded graduates who could become successful job creators rather than job seekers.
3. The curricula used by the Nigerian tertiary institutions are obsolete when viewed from the perspective of the modern global labor market. Thus the orientation and content of the program followed by students do not produce the graduate attributes needed for the current labor market. Identifying a wide range of entrepreneurship ventures and building comprehensive curricula from there is a critical area of concern for educators in Nigeria.
4. Government should provide funds for entrepreneurs. Due to widespread inequality in Nigeria, many aspiring entrepreneurs lack the required capital to start up their ventures, and assessing bank loans.
5. There is a need to establish more Business incubators across different states in Nigeria. This will help to duplicate the positive results of incubation programmes in different parts of the country, thereby enhancing entrepreneur job creation which will eradicate unemployment.

### 6.2. Limitations of the study

It is important to note that this research engaged a very small sample population for enclosing the possibility of generalization. Furthermore, this study relied on self-report measures which can potentially lead to subjective bias among the respondents.

### 6.3. Future Research

Further research should assess the extent to which entrepreneurship programmes (specifically incubators), are both effective and sustainable as a means of boosting the entrepreneurship capabilities of participants and reducing unemployment in Nigeria.

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## **TREND OF CORPORATE GOVERNANCE IN THE REPUBLIC OF SERBIA**

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### **ABSTRACT**

*In this paper, a special emphasis is placed on the analysis of the current state of corporate governance in Serbian private-owned companies and public and state-owned enterprises, as well as on the possible directions of improving corporate governance in Serbia. In this regard, the paper points to the existing problems and shortcomings of corporate governance in Serbia, as well as the efforts that Serbia must make to improve corporate governance - primarily based on the experience of developed countries with good corporate governance practices, but also experiences of other countries in transition.*

**Keywords:** *corporate governance, privatization, concentration of ownership, business efficiency, legal and regulatory framework, capital market, institutions*

### **1. INTRODUCTION**

When it comes to the issue of corporate governance today, countries with the developed market economy and the long tradition of shareholders, as well as effective institutions pay the same attention to it as the former socialist countries that are still building up market economy institutions through the process of transition. Starting with the transition process in the nineties of the twentieth century and after several decades of business of state-owned or socially-owned enterprises, all former socialist countries were faced with the need to create an appropriate model of corporate governance. While countries with a developed market economy have tried to improve the system of co-operative management, in order to ensure that the management and functioning of the company primarily serve to realize the interests of the owners of the company, and then to meet other interests, the countries in transition had a completely different problem. It was necessary to introduce a series of new institutes in the legal system and practice of doing business. It is important to emphasize that these institutes were not known or used in the previous period in these countries. The lack of historical heritage, good corporate governance practices, the failure of institutions in the market economy system, increased corruption in the privatization process, with a consistent way of thinking and managing

companies - initially did not achieve the desired goal in transition countries in terms of establishing a satisfactory level of corporate governance. Adopting legal solutions in which social-economic environment was implemented and adapted to the standards of corporate governance from countries with a developed market economy and corporate governance practices was the first, but also the most important step towards the creation of an appropriate corporate governance framework in transition countries. A much more difficult task for economic policy makers was to change mindsets and train human resources to fight with the competition on the market. Therefore, the challenge of corporate governance is quite universal. Countries with a developed market economy and countries that have completed the transition process are also paying attention to this issue or are still in the process. Engaging in the world capital flows, attracting foreign investment and the overall economic development of the country presupposes the existence of legal framework and practices of businesses that will guarantee and respect the achieved standards and principles of protecting the interests of existing and potential equity holders. The concept of corporate governance is gaining an increasing importance with globalization and internationalization of the market. The global economic crisis and the financial collapse of many large world companies highlighted, first and foremost, corporate governance issues in both developed and transition countries, including Serbia. Looking at the consequences of the global economic crisis, we think that part of the problem, first and foremost, stems from the various weaknesses and failure of corporate governance. Even in situations where there are rules, codes and developed corporate governance practices, the global economic crisis has shown that more effective application of corporate governance standards is necessary. On the other hand, the establishment of corporate governance in public enterprises and capital companies with state capital is a significant challenge in countries with a developed market economy and corporate governance practices, but also in countries in transition. Namely, the main challenge is to find a balance between the state's competence in the exercise of its ownership functions, such as the candidacy and the election of directors of public and state companies, as well as members of the supervisory board, while refraining from excessive political interference in the operation and management of a state-owned company. The next important challenge of the state is to ensure that there is equity and market competitiveness so that private sector companies can compete with public enterprises and/or state capital companies, and that authorities do not distort competition in the market by using their regulatory or supervisory authorities, in order to provide conditions for making profits to public or state companies based on their monopoly position. For these reasons, and above all to responsibly take ownership in public enterprises and state societies, the state should use all the funds that apply to the private sector to improve the practice of corporate governance, including the OECD Principles of corporate management. This particularly applies to public or state-owned capital-based societies.

## **2. THE STATE OF CORPORATE GOVERNANCE IN THE REPUBLIC OF SERBIA**

It can be said that for the economies of the countries in transition, which includes Serbia, corporate governance is a completely new concept. The main issue is the transition from a planned, or negotiated economy to a market where financial institutions and markets play a major role in allocating resources and determining the economic performance of the country. Serbia has been carrying the bursts of planned socialist economy for a long time, where the institutions of the financial system were mere executives of government decisions on the directed allocation of resources. Only in the early 1990s, with the formation of the original legal framework for privatization of social enterprises and the reform of the financial sector, Serbia began with the creation of the necessary conditions for starting the application of corporate governance. The process of changes has prompted, among other things, the necessity to find additional financial resources necessary for the languishing Serbian economy.

The only way to secure the necessary funds was the interaction between the banking sector and the capital market. Then begins the formation of the first public joint stock companies through privatization processes, as well as the re-activation of stock exchange operations through the obligatory inclusion of shares of these companies on the Belgrade Stock Exchange, which leads to an increase in the interests of the widest public for the affairs of capital markets, as well as creating conditions for the implementation of corporate governance systems in Serbia. However, the lack of a tradition of corporate business, the lack of a legal, institutional and regulatory framework, as well as educational institutions and, consequently, a chronic shortage of qualified personnel resulted in incomplete implementation of the corporate governance system in Serbia, i.e. its complete absence. In Serbia, corporate governance is still not applied to the required extent, apparently because a small number of investors realized the importance and advantages of applying corporate governance rules, and in many Serbian companies there is a connection between ownership of capital and control. Namely, in Serbian companies, most of the owners possessing a control package of actions in the society are at the same time members of the management of the company so that there is no adequate system of responsibility and supervision in these companies, and there are evident misuses through interrelated relationships with related persons and inadequate publishing information. A particularly weak point of corporate governance in Serbia is (in) transparency. Namely, members of the assembly, primarily minority shareholders and the public, are poorly informed about the company's operations. This fact is supported by the fact that minority shareholders in Serbian companies are often not informed even when the general meeting of shareholders is held, let alone what decisions are made at shareholders' assemblies. Previous experience has shown that most of these shareholders are insufficiently acquainted with their rights, i.e. the rights arising from actions have the means of their realization, and that, in most cases, they are uninterested in actively participating in the management of the company whose shares they own. Also, the special problem in Serbia was that there were two groups of shareholders in joint stock companies that had different and sometimes contradictory interests. One group of shareholders was represented by the so-called external shareholders (mostly pensioners and former employees) whose main interest was to generate income - by selling shares on the market, and often at depressed prices, while the other group represents the internal shareholders (employees in the company) characterized by frequent interference of rights based on work with rights based on ownership and whose basic interest is to retain the existing ownership structure in the company, as well as to prevent "unwanted takeover", and above all, in order to preserve jobs (7, p.50). It can be noted that in recent years, the impact of politics on the business of the economy has been significantly reduced, but it still exists, so that the unfavorable state of corporate governance requires urgent, but well-designed reforms, so that societies can become well-managed and competitive, on both domestic and foreign markets. The ambiance and conditions for running companies in Serbia today are at a satisfactory level. This is because the legal regulation of corporate governance is constantly improving, but it is a very long and hard way to fully implement the principles of corporate governance in practice. Most laws are in line with the legislation of the countries of the European Union. The remaining laws, necessary for the further economic development of the country, are under preparation and are expected to be almost adopted and implemented. However, the construction of the corporate governance index for Serbia indicates that there is an unequivocal discrepancy between the legislative norms and their application, in other words, between the law and the factual situation. The basic problem of the low level of quality of corporate governance in Serbia is not in legal norms but, unfortunately, in the weakness of institutions. The main problems relate to the non-application of existing legislative provisions, inexperience, unclear responsibilities of institutions, and the adoption of legislative solutions without considering their compliance with corporate opportunities in Serbia and the region.

Hence, the low level of quality of corporate governance in Serbia predominantly stems from the weakness of institutions. Namely, legal frameworks exist but their consistent application is absent in practice. Companies in Serbia are characterized by high concentration of ownership, where large shareholders or a small number of majority shareholders have all the controlling power, and many so-called "small" shareholders are at the margin of decision-making. There is also a low degree of separation of ownership and control in Serbian companies, which opens the possibility for majority shareholders to realize their interests, but at the expense of "small" shareholders. The growth and development of Serbian companies is conditioned by the extent to which the management of these companies is ready to change its earlier business philosophy, and to accept some new management concepts for them. Implementation of the principles of corporate governance represents a major step towards adopting the way of operating successful corporations in the world. Namely, the development of Serbian companies is directly proportional to the degree of readiness of its management to accept as much as possible the rules and principles of modern corporate governance. Acceptance of this concept of business enables, among other things, prediction of changes and timely adaptation to new trends and challenges in the global business environment. However, most business entities in Serbia do not yet understand the concept and meaning of corporate governance, or its purpose, so it is necessary, firstly, to raise awareness of topics relating to corporate governance in our area. It is also necessary that educational institutions fit corporate governance issues into their curricula in order to enable young people to acquire knowledge in the fields of organization, human resources management, advertising and public relations, business communication, securities, operations in financial stock exchanges, international standards and regulations, etc.

### **3. CORPORATE GOVERNANCE SYSTEM OPTIONS IN REPUBLIC OF SERBIA**

In our country, the process of implementing a corporate way of organizing companies is almost a century late in comparison with the developed part of the world. As much as the process of introducing corporate governance in transition countries is complex in relation to countries with a developed market economy, so much the problems of corporate governance in Serbia are more complex than in other transition countries. It can be said that one of the reasons is the fact that companies in our country have undergone such changes and turbulences (beginning with the disintegration of the SFRY, war events, changing the model of privatization, operations in conditions of international isolation and sanctions), and it is difficult "to bring them in order." Namely, the company's operations in the period of economic sanctions when the companies knowingly circumvented the laws and regulations, both in international and domestic business, led to many negative business events in our areas which were difficult to eradicate quickly (7, p.74). Also, in the decades of self-managing socialism, the management of enterprises has become ineffective, because the concept of social / state ownership (almost by definition) could not create the appropriate legal framework and adequate incentives for innovation and improvement of corporate governance. The constant mixing of state bureaucracy and political parties into the business of the company only aggravated the situation, although their actions were sometimes motivated by the willingness to eliminate the perceived institutional and internal weakness. Establishing the appropriate legislative and regulatory framework is certainly a basic prerequisite for improving corporate governance in Serbian enterprises. With the reform of the economic legislation, ie the adoption of laws regulating the establishment and operation of enterprises (the Companies Act and the Law on Registration of Business Entities), as well as the adoption of a set of legal regulations in the field of financial market (Capital Market Act, Law on Takeover of Joint Stock Companies, Law on investment funds), legal, regulatory and institutional frameworks for operating and managing companies in our region are significantly shaped. Also, in order to improve corporate governance, the adoption of the Code of Corporate Governance of the Serbian Chamber of Commerce was of great importance,

since it was done with the "regulation" of legal institutes in the field of corporate governance created by legal provisions, as well as its application in practice (2, p.2). Lately, in Serbia, many joint stock companies bring their own corporate governance codes defining the basic principles of corporate governance, which significantly contributes to the improvement of management of these companies. However, creating an appropriate legal framework is one thing, and its implementation is completely different. Although at first glance it seems that existing legal solutions provide shareholders with a good framework for controlling corporate governance (prescribed procedures for exercising voting rights, procedures for convening a general meeting, informing shareholders, selecting members of administrative and supervisory boards, etc.), practice shows that there is a large gap between the declarative and the actual state. The reasons for this are numerous and are reflected primarily in the problematic ownership structure, the incomplete functioning of the capital market, undefined shareholder and management relations, the incompetence of administrative and supervisory boards, and discontinuities in professional development and monitoring of global trends in corporate governance (8, p.114). In the last decade of the last century, the processes of transformation from a planned to a market economy started slowly and shyly in Serbia. This process has been intensified since 2000, by enacting a package of laws that reintroduce private property and shareholders, as well as the practice of corporate governance in our areas and capital market institutions, which is characteristic of countries with a developed market economy and corporate governance practices. The result was - an accelerated continuation of the privatization of Serbian companies. Corporate management has been recognized as a very important part of the reform process. There are three main factors that have conditioned the Government of the Republic of Serbia to ensure the implementation of good practices in the company's corporate governance, which will ensure the appropriate level of market efficiency and transparency, and that is: (1) globalization, (2) An economic factor-protection of investors' interests and (3) a political factor-joining the European union. The main features of the corporate governance system in the Republic of Serbia are the following:

1. Lack of tradition - Corporate governance in Serbia is a relatively new concept. The system is very complicated and requires a lot of engagement of all stakeholders, ranging from employees, company management, the state. The introduction of this system represents a long and painstaking process. An additional aggravating circumstance for us is the legacy of the socialist system of social property and workers' self-management, which has worked in the country for fifty years. The hardest thing is to change people's awareness and the way they think.
2. Lack of staff and educational institutions - The process of corporate governance implementation, i.e. the creation of a regulatory, institutional and legislative framework for its successful implementation must be led by qualified experts. The educational system of our country must adapt to the new situation, by introducing new directions and curricula at some faculties (economics, law, management ...) in order to successfully implement the entire process. Also, it is necessary that all personnel possessing such knowledge and skills will be given the opportunity and opportunity regardless of their political affiliation, and that the selection of personnel by "political affinity" or by family ties, becomes only a distant past for Serbia.
3. The new corporate governance system, which includes the formation of committees (board of directors, supervisory boards), shareholders' assemblies, audit commissions, fees, appointments, and the secretary of the company, is diametrically opposed to the socialist system of corporate governance, which practically operated in Serbia until the end of the last century. Many actors are simply not aware of what their specific task is and how to do it.

4. **Concentrated Property** - Until 2001, dispersed ownership of privatized companies was represented in Serbia, which was the result of, first of all, the Law on Ownership Transformation of 1997, which envisaged free distribution of ownership of employees and other categories of population (pensioners, insured persons). With transitional changes, i.e. after 2001, in companies that were privatized under earlier laws, which favored free distribution of shares to citizens or employees, the process of re-privatization was carried out through the sale of shares held by "small" shareholders or the State Share Fund Of the Republic of Serbia on the Belgrade Stock Exchange, which mainly resulted in a concentration of ownership in those companies. Namely, on the Belgrade Stock Exchange, the buyers of the majority share package bought shares of "small" shareholders. They did not even have the basic knowledge of corporate governance and the capital market, so they sold the shares to the first bidder, without thinking, and often at depreciated prices. By adopting the Law on Privatization in 2001, the emphasis is placed on the limited concentration of ownership by majority sale (70%) of the capital of socially owned enterprises to strategic investors. The goal was to achieve better control over owners over managers. The existence of a majority owner is recommended in transition economies where external mechanisms of corporate governance and institutional infrastructure are not sufficiently developed. This is because the assumption that the dominant owner will be better able to hire all the available resources of the privatized company in the post-privatization period, in order to increase the efficiency of the company's operations. As a result of the privatization processes conducted in Serbia, today we mostly have concentrated ownership in private sector companies, or a large percentage of privatized companies have only a few (one to five) owners, who together have a control package of shares. This has the opposite effect, which often leads to misuse. Namely, in this case majority shareholders, based on insider information and in agreement with the management, implement their interests at the expense of small shareholders.
5. **"Capital dilution"** - This is one of the mechanisms of protection against hostile takeover in developed market economies. Some forms of this mechanism that have emerged in Serbia point to inadequate protection of minority shareholders and deficiencies and omissions in the laws governing this field.
6. **The tendency to exclude companies from the stock market** - This is one of the ways in which the management of certain Serbian companies reacts, because of the uncertainty they feel and the fear of hostile takeover. A paradoxical situation is emerging in which the desirable status of a public joint stock company, which provides greater financial flexibility and reduces the cost of obtaining additional capital, replaces the change of the legal form and the withdrawal of shares from the market, for the above reasons or because of the management's desire to take control of the company and manipulations over existing, often uninitiated and disinterested minority shareholders.
7. **Interception of owners in management and control** - The basic rule of corporate governance is that ownership is separate from management. In public joint stock companies in Serbia, especially in those that have been privately owned, and where there is a majority owner, there is a big problem of constant interference by the majority owner in the company's management and control activities. This is the result of a low level of corporate awareness of the owners and their desire to control all aspects of ownership and business, although in large companies it is virtually impossible. Then there are frequent conflicts of management with the owner and consequently a large fluctuation of managers in the management structure. The result is the poor efficiency of such a system and the loss of reputation and profit.
8. **Weaknesses in the work of state institutions and the inefficiency of the judiciary** - there are weaknesses in the work of the competent state institutions and the judiciary that are not

efficient and powerful enough to perform tasks within their competence, as well as to provide an incentive and regulated environment for the application of the appropriate rules of conduct enterprises.

So, corporate governance in Serbia is still not at a satisfactory level. Significant progress has been made with the reform of economic legislation, but this is far from sufficient, given that more serious results can only be expected in the case of a more comprehensive and harmonized approach to the regulation of this extremely important area. Namely, after the privatization and introduction of the private property institute, Serbia is practically building up a new legal system in the sphere of economy. It is understood that Serbia does not have the legal capacity to build a new original business law. There is no objective need for it, nor it is enabled by the circumstances of the environment. Namely, aspirations towards EU membership and the signing and ratification of the Stabilization and Association Agreement with the EU obligate Serbia to harmonize legislation with EU regulations (11, p.33)

#### **4. POSSIBLE RIGHTS OF CORPORATE GOVERNANCE UNDERSTANDING IN THE REPUBLIC OF SERBIA**

Statements and assessments of the achieved state and level of corporate governance development in Serbian companies imperatively imply the need for special attention to be devoted to establishing an adequate system of corporate governance, as well as training all participants in that direction to use the opportunities that exist and to improve them in accordance with the best practices in this area. In our opinion, particular attention should be paid to:

- permanent education, professional, but also the general public, in order to familiarize with the basic postulates of the market economy and corporate governance, apportioned shareholding in the broadest sense of the word;
- continuous monitoring of the implementation of established corporate governance institutes affirming positive and sanctioning negative practices, primarily related to: protection of shareholders' rights, equality of all, especially minority shareholders, disclosure of important information and responsibilities of the company's board;
- continuous upgrade of the concept of corporate governance, based on the experience, the best practice and on the principles of corporate governance, which are contained in the OECD principles of corporate governance.

In order to accelerate the development of its economy and reduce the lagging behind of the developed economies of the world, Serbia, as a transitional country, has to put to the forefront, in addition to privatizing the company, the introduction of a modern, professional system for managing these companies, in other words, to devote the issue of corporate governance improvement. The normalization of the ownership structure is a prerequisite for further improvement of corporate governance in Serbia. Namely, only a definite transition from the ownership of the employees to the hands of strategic investors can end the conflicts between employees (who are at the same time shareholders) and the majority owner, about things that do not have direct links with the management of the company, but rather refer to issues such as: the amount of earnings, job security and the like. and everything is in the domain of labor relations. Then the transition of publicly-owned companies (especially smaller companies) into the status of non-public companies will simplify the governance structure by bringing ownership closer to the operational management and, consequently, significantly narrowing the scope of corporate governance issues. Upon completion of privatization and normalization of the ownership structure in our region, the role of the financial market as a source of financing of companies will increase, and thus the importance of the reputation and trust enjoyed by joint

stock companies in those of which the capital is supplied. Consequently, the importance and importance of corporate governance will increase, which is an extremely important factor in the level of investment and credit rating of the company. Thus, we have come up with the basic motive for improving corporate governance in companies, which exists in countries with a developed market economy - and this is our own interest. This is neither a legal obligation nor coercion, nor an issue of business morality, but an interest of the company and shareholders, because well-organized corporate governance contributes significantly to improving the company's performance and increasing business reputation in the outside world. Therefore, in terms of advancing corporate governance, the greatest progress can be achieved only by strenuous shareholding companies. In our country, corporate governance is at a satisfactory level, mainly in companies owned by foreign, reputable companies, while in companies owned by domestic owners there is plenty of room for improvement of corporate governance. Namely, in a large number of these companies, members of the management board do not have sufficient (or not generally) knowledge of corporate governance and its importance, and therefore the management system in these companies can not be well regulated, regardless of the degree of appreciation and application of the law regulating this area. In order to improve corporate governance in Serbia, as well as to better protect the rights of minority shareholders in Serbian companies, it is important that in addition to the adoption of appropriate laws that exist in countries with developed market economies and corporate governance practice, there is a binding application of these regulations in practice. It is also important to mention a much more efficient judiciary in the field of minority shareholders' rights protection. Specifically, in the field of company law, and especially in the field of minority shareholders' rights, judicial (and, of course, arbitration) practice has not been developed, given that the relevant legal sources in this area are of a recent date, and it takes time to deal with them especially in order to create an established practice (12, p. 13). Furthermore, in order to improve corporate governance in Serbia, it is important to develop and implement its own (internal) Corporate Governance Code, which is brought by the capital companies themselves. Namely, many issues related to corporate governance are more ethical than legal, so high quality of corporate governance can only be achieved in situations where the behavior of market participants, in addition to legal regulations, is regulated and voluntarily adopted by ethical standards, which imply that there are rights and the obligations of the company towards legal and natural persons in mutual relations. In the end, we especially emphasize that in order to improve the corporate governance system in Serbia, in addition to improving the legislative and regulatory framework and more efficient judiciary, it is necessary to monitor the experiences in the corporate governance plan of developed countries with a long tradition of shareholding and corporate governance practices, as well as the experience of transitional economies in the environment, which have passed (or are still passing) through the period of corporate governance implementation in their businesses. For this reason, it is a challenge for Serbia to encourage the creation of a corporate governance system that would be in line with opportunities, tradition and experience, but also based on the application of the experiences of other countries.

## **5. CONCLUDING CONSIDERATIONS**

The experience of the developed countries tells us that there is no perfect system of corporate governance that could uniformly apply to all situations and systems. The basic characteristics of corporate governance must be adapted to the tradition and business environment of each country, or even of the companies themselves. The economic system and the functioning of companies in Serbia are primarily determined by the privatization process, which resulted in the emergence of a large number of stock companies and a high degree of concentration of ownership. These changes were not accompanied by an equally rapid development of regulations, institutions and the financial market, which opened the door for numerous abuses

and corruption in a situation where many companies have a majority owner, with almost unlimited influence. Problems arise in relations between majority owner and minority shareholders, in which minority shareholders are in a much more disadvantaged position, given the poor institutional protection of their rights. Space for problems on shareholder relations - management is almost gone, because the majority owner can control, affect the work, and even change management at any time. Establishing the appropriate legislative and regulatory framework is certainly a basic precondition for improving corporate governance in Serbia. In recent years, corporate governance in Serbia has been significantly improved through the adoption of better laws and internal corporate governance codes. All these regulations are largely aligned with the principles of corporate governance published by the OECD, EU directives and corporate practices in the countries of continental Europe. The predominant orientation towards EU solutions will primarily determine the future of the development of corporate practice in our country and the impact of strengthening internal management mechanisms and harmonizing the business of companies with the rules of good business practice (3, page 183). It is indisputable that the legal regulations of corporate governance are constantly improving, but the path to full implementation of the principles of corporate governance in practice is very long and hard. Namely, the lack of political will to implement laws, underdeveloped jurisprudence, underdeveloped financial market, low shareholder culture and a lack of genuine interest in improving corporate governance, insufficiently informed shareholders and their sometimes "destructive" practices can be identified as challenges that lie ahead of the process of improving and implementing the corporate governance framework. Although the current legal rules and solutions enable shareholders in Serbia a good legal framework for controlling the company's management, in practice there are many problems and disagreements between shareholders, which are particularly at the expense of minority shareholders. One of the main reasons for most of the problems is seen in the existing ownership structure, the poor functioning of the capital market, poorly managed shareholder and management relations, the incompetence of executive and supervisory boards, and insufficient education in the field of corporate governance. Based on the above, it can be concluded that the basic problem of the low level of quality of corporate governance in Serbia is not in legal norms but in the weakness of institutions. The main problems relate to (non) implementation of existing legislative provisions, inexperience, unclear jurisdiction of institutions, and acceptance of legislative solutions without taking into account their compliance with corporate opportunities in Serbia and the region. In situations where business results are still not linked to the stock exchange value of companies, there is no significant interest in achieving a better value for the company through good corporate governance and the interest of potential investors who are willing to invest significantly more funds into the shares of the companies in which it exists corporate governance, but in the actions of a company with similar financial indicators that is badly managed. Today, institutional investors are increasingly paying attention to the quality of management in the companies they want to invest in. The costs of poor management are very high. A modest level of corporate governance in developing countries, such as Serbia, can pose a serious threat to the future development. Namely, if companies from developing economies do not start to attract capital, they are condemned to remain small and inefficient, especially in comparison with large corporations in the global market. This is because, in the conditions of globalization, many developing countries are increasingly competing for attracting foreign investment, and it is clear that capital will go to those markets that are better regulated and that are more in line with transparency, efficiency and integrity standards. Namely, if corporate governance in a country is bad, capital will go elsewhere. For this reason, raising and improving the standards of good corporate governance is very important for all companies and countries - it is an investment that pays off. In order to improve corporate governance in Serbia, in addition to the improvement of the legislative and regulatory

framework, it is necessary to monitor the experience of developed countries in terms of corporate governance, as well as the experiences of countries in the environment that have passed or are going through the period of implementation of corporate governance in their companies.

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# BUSINESS PROCESS MANAGEMENT AND DIGITAL TRANSFORMATION

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## ABSTRACT

*Business Process Management (BPM) is with us for almost 50 years. It is an old concept, representing a business change paradigm, but its popularity rises every 10 years driven by the new/next BPM wave. On the contrary, Digital Transformation (DT) is a contemporary concept and rising business paradigm which mandatory relies on Information and Communication Technology (ICT) that tends to overpass BPM and accompany its so-called 4th wave. DT is derived from the basic BPM idea, based on process change supported with contemporary technology, but it has the advantage of right timing, since almost all contemporary technologies like: IoT, Big Data, Robotics, Artificial Intelligence, 3D printing... etc. are on the development »peak« or on adequate »maturity level« for real implementation in business processes. This paper compares BPM and its »waves« with the road to development of DT, starting from computerization, informatization, digitalization and getting to today's Digital Transformation. DT includes the shift in mind of people, change in business processes and radical business transformation towards new business models based on contemporary technologies that enable them, and organizational change that brings »the next step« in business evolution to life. Research uses a retrospective analysis of these terms and compares them across time, from basic idea to implementation and widespread across globe as a new paradigm of today's business world positioning the Digital Transformation as new 4th wave of BPM.*

**Keywords:** Business Process Management, Digital Transformation, Comparison, Waves

## 1. INTRODUCTION

Constant desire for improvement and progress has been in human nature since the beginning of time. Organizations in the sense of enterprise, company or institution; as the most complex form of human activity; becomes a constant subject of change in order to increase its effectiveness and efficiency of their employees through set of business processes. In this effort disciplines like Business Process Management (BPM) emerge to systematically approach process change and gain better results in all process levels from operations till management. Lusk, Paley and Spanyi (2005) stated that the evolution of Business Process Management is in its third wave over the last thirty five years (now in 2019 so it's now 50 years old concept according to some authors in forth wave) and still in evolution in the form of a customer-centric and process-centric approach to improving business results and today broadly recognized as a professional discipline. Alongside the end of the third wave of BPM, rapidly spreading across the globe, new approach is rising, so called Digital Transformation (DT). According to Pihir, Tomičić-Pupek and Tomičić Furjan (2018) "DT is a new emerging paradigm, which introduces strategy-oriented and customer-centric changes in infrastructure and processes in modern organizations relying on contemporary information and communication technologies (ICT). Transformation in DT is not a one-time process, but it is a holistic approach of shifting organizations towards implementation of new methods for raising organizational performances by boosting the organizational capabilities and competitiveness, creating thereby new models of doing business". This definition made by cited authors was based on more definitions of DT by leadings authors in this field like (Westerman, 2014) or (iSCOOP.eu, 2016) and it seems that DT definition is pretty similar to BPM definition since they are two paradigms both focused on customer-centricity and with goal of improving business results almost always relying on

contemporary technology implementation and process change to gain improvements. So in few words, this article tends to presents comparison of these two paradigms across time from its fazes of evolution and introduction to broad implementation. In case of BPM that are so called waves of its rising in practice and scientific circles and in case of DT in its recognised predecessor are paradigms used by BPM to improve business process in the past with use of information and communication technology (ICT) by computerization, informatization, digitalization and finally digital transformation of business. Paper structure was determined by following section presenting methodology as used research methods and two main research ways used in this research. After methodology part, results were presented as bibliographic research results and literature review results. At the end results was made through upgrade of 3 waves of BPM adding the Digital Transformation as Business Process Management 4th wave. Papers end with conclusion sections after which follows the bibliography used in this paper.

## 2. METHODOLOGY

Research was made in two main ways. Firstly, through the bibliographical analysis in scientific database Web of Science (WoS) by terms “Business Process Management” and “Digital Transformation” as topic in papers and other sources. Searches were made by every term separately in brackets as a topic and separately as search in the titles of database sources. According to this first part topic of BPM and DT were observed as terms from their first appearance in data base or “science” through its maturity path till today, along with trends, citations and top papers analysis for every term made separately and combined together were resource has containing booth terms as topic or in title of source reference paper or other sources. All searches were made in May 2019. Second research way, was classic literature review across identified best papers with most important milestones, in terms now seen as business paradigms, in its history or development path. Both terms were compared across their development or evolution path and described through main characteristic and similarities.

## 3. RESULTS

Results as main section of this paper, were divided into three subsection according to: bibliographic research results; literature review results and as third subsection of positioning the DT as the 4<sup>th</sup> wave of BPM describing its time line, focus, business, technology and tools/enablers.

### 3.1. Bibliography research results

First part of research was made as bibliographic research in WoS scientific database made for terms:

- a) “Business Process Management” in topic from all databases which made result of 2.803 hits on the research topic. If we reduce the search only to title of resource papers and other scientific resources we get 476 reference sources (papers, books and other resources).
- b) “Digital Transformation” in topic from all databases made result of 1.154 hits on the research topic. These results were slightly reduced to correct time span from year 2000-2019, since the term digital transformation has its full meaning from year 2000. Before year 2000 term digital transformation was used in other meaning, mainly as a term that describes the conversion from analogue to digital. For example, as a transformation of photography and other staff from analogue to digital media. If we reduce the search results in this way, the search made 1132 hits. If reduced more to only the title of resource papers and other scientific resources we get 366 reference sources (papers, books and other resources).
- c) When search was made on both terms together “Business Process Management” AND “Digital Transformation” results shows only 11 hits for topic and only 2 results in titles.

This shows that comparison of this kind was not done yet and that both terms as paradigms are substantially researched and present at scientific scene as legitimate research topics.

When the results were presented across time span we could compare both “paradigms” from point of popularity in scientific community and see a peak of its research in last couple of years. First we could observe the BPM in numbers of published papers (Figure 1) per year in last 25 years (not all years are on graph since the large time span for this topic, but numbers presents publishing trend in right way in terms of early years before year 1994).

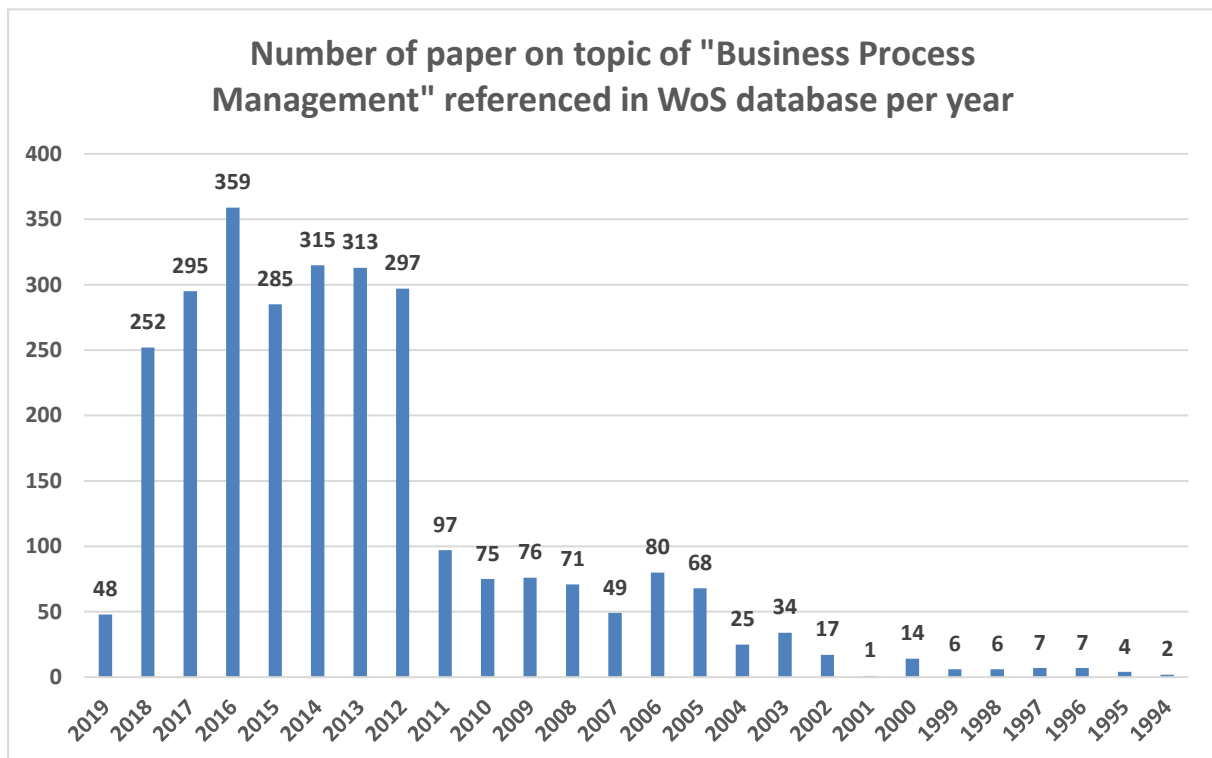


Figure 1: Number of papers on “Business Process Management” in WoS per year

Second graph (Figure 2) presents the publications with term “Digital Transformation” in last 20 years in reduced time span (see beginning of section 3.1 for explanation) in WoS per year.

*Figure following on the next page*

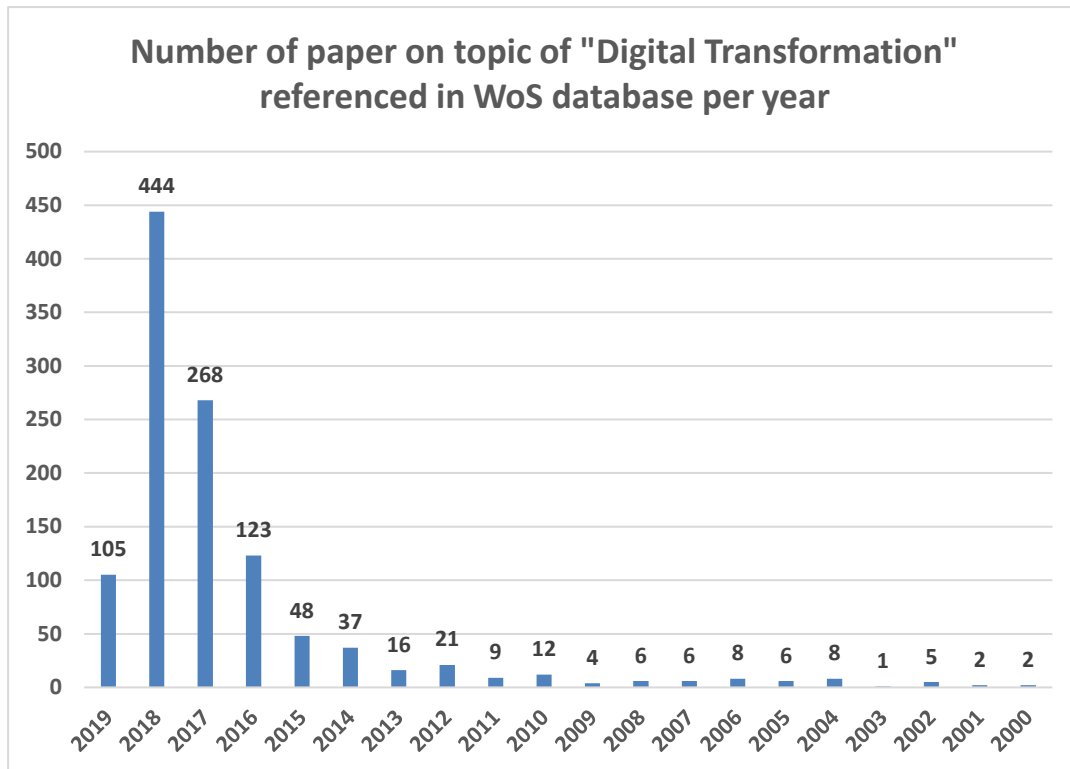


Figure 2: Number of papers on “Digital Transformation” in WoS per year

From both graphs (Figure 1 and 2) it could be concluded that both topics are significantly represented in scientific researches in last couple of years (year 2019 is still in progress and it's not yet properly indexed so it could be ignored). It's clear that “Digital Transformation” is new paradigm just establishing its place in scientific community, reaching its maturity in scientific manner from year 2016 further, although it has been defined in “today's meaning” in year 2000. From statistical trend point of view, it could be concluded that DT is still not reaching its peak and that number of papers is rising and peak is still not reached. From perspective of “Business Process Management” it's clear that this paradigm is well established and lot older than DT. It could be seen from graph (Figure 1) that it has its peaks from time to time “in waves” or that its popularity is on peak or was on peak in last couple of years since the trend shows decrease in number of papers in last years (2017 and 2018). When database slow indexing taken into account (for publications sometimes takes year or two to be included), it could be concluded that BPM reached its maturity and it is used more and more in context of other terms not as term alone. Its popularity fades and its research potential is shrinking. Maturity faze could be perceived as reached in years 2003-2010. New papers dealing with topic BPM shows that it is not dead but since the top cited papers in the topic (not title including BPM) shows that the term is still active the context is changed and influenced with new terms like: Digital Transformation, Industry 4.0 indirectly and directly with technological terms like: Internet of Things (IoT), “Smart” City-Factory-Manufacturing, Data Analytics, Big Data, Cloud Computing, 3D printing and Artificial intelligence (AI), and others. In terms of top papers cited in these two topics it could be concluded that BPM top cited papers are from years 1998-2011 and only two of ten papers are in direct link to BPM consequently in the title of resource. For DT the situations with top ten cited papers is slight different. Top ten papers are from years 2006-2016 which is 5-7 years of time shift from BPM. Directly linked papers with DT in title (from top ten papers) are also represented with three out of ten papers. Although, top ten papers in DT reduced to time span 2000-2019 still include papers dealing with digital transformation as transformation between analogue and digital, and not all representing the real nature of the term in context of

this paper (this could not be excluded in automated way but just manually and sometimes seems difficult since the digitalization is for some authors almost the synonym of digital transformation what is not the real meaning at all).

### 3.2. Literature review research results

New trends in BPM and emerging of DT as global trend and paradigm in full development potential. Many authors research this new direction of organizational and process change, relaying on technology but in fact change of people mind set and processes by creative use of technology that is mature for its full potential use in mutual intercourse and supplementation. “Due to its unique features and accessibility, the focus of implementing digital technology is no longer just to improve internal operations, but to expand internal dimensions, reach customers and external partners, affect services, integrate processes, disrupt markets, and fundamentally change industries” (Ivančić, Bosilj Vukšić, and Spremić, 2019). This means that new wave of process management could not only tend to change how the organization is doing business but fundamentally change the relations between the companies in creative use of new technologies. It is no surprise that the notion of digital transformation link innovation as such and author Van Looy, A. (2017) make a quantitative study of the link between BPM and digital innovation. Common way of improving business process is also by automation but there is all new line of possibilities by using machine learning and artificial intelligence in doing so where companies can decide which way is better or “smarter” to go and automate BPM (Paschek, Tudor Luminosu and Draghici, 2017). As we know process improvement is the most value-added activity in the BPM and some real case study evaluation of how to exploit digitalization potential in business process is made by Denner, Puschel and Roeglinger (2018). The same was concluded by Schwaferts and Baldi (2018) when stated that “...82% of the companies stated that their driver for digital transformation was their wish to support their business processes”. Lederer, Knapp and Schott (2017) implies that BPM drives digital transformation and it could be seen as technologically-driven; human-driven or by following classical paradigm of BPM. They study several case-studies that deviate from the traditional BPM paradigm in their fundamental approach what seems like new evolution forward in BPM and also DT as new paradigm incorporating everything that BPM stands for. New wave was announced by Reichert (2015) like the need for filling the gap between BPM promises and its actual achievements in practice, by discusses emerging challenges, and relates BPM research to current waves like “Big Data”, “Big Software” and “Cloud Computing”, which provide new prospects for future BPM research. Similar was determined by Morris (2013) through the retrospective of BPM waves and forecasting use of smart Business Process Management Suits (BPMS) today known as Intelligent BPMS (iBPMS) and integration with current application or development from process models as now known as POA (Pihir, Tomičić-Pupek and Kolarić, 2017)

### 3.3. Digital Transformation as Business Process Management 4<sup>th</sup> wave

In manner of all analysed literature and upgrading the Lusk, Paley and Spanyi. (2005) three waves of process evolution the upgrade or addition to this; authors table was made in this paper by adding last 4<sup>th</sup> wave as Digital transformation wave of Business Process Management. (See Table 1).

*Table following on the next page*

*Table 1: BPM and DT across time: DT as a New BPM Wave*

<b>Phase</b>	<b>Time</b>	<b>Focus</b>	<b>Business</b>	<b>Technology</b>	<b>Tools/Enablers</b>
<b>Industrial Age</b>	1750-1960s	<ul style="list-style-type: none"> <li>– Specialization of Labour</li> <li>– Task Productivity</li> <li>– Cost Reduction</li> </ul>	<ul style="list-style-type: none"> <li>– Functional</li> <li>– Hierarchies</li> <li>– Command &amp; Control</li> <li>– Assembly Line</li> </ul>	<ul style="list-style-type: none"> <li>– Mechanization</li> <li>– Standardization</li> <li>– Record-keeping</li> </ul>	<ul style="list-style-type: none"> <li>– Scientific Management</li> <li>– PDCA Improvement Cycle; Financial Modeling</li> </ul>
<b>Informational Age</b>					
1st Wave Process Improvement	70s - 80s	<ul style="list-style-type: none"> <li>– Quality Management</li> <li>– Continuous Flow</li> <li>– Task Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>– Multi-Industry Enterprises</li> <li>– Line of Business</li> <li>– Organization Mergers &amp; Acquisitions</li> </ul>	<ul style="list-style-type: none"> <li>– Computerized Automation</li> <li>– Management Information Systems</li> <li>– MRP</li> </ul>	<ul style="list-style-type: none"> <li>– TQM</li> <li>– Statistical Process Control</li> <li>– Process Improvement Methods</li> </ul>
2nd Wave - Process Reengineering	1990s	<ul style="list-style-type: none"> <li>– Process Innovation</li> <li>– “Best Practices”</li> <li>– Better, Faster, Cheaper</li> <li>– Business via the Internet</li> </ul>	<ul style="list-style-type: none"> <li>– Flat Organization</li> <li>– End-to-end Processes</li> <li>– Value Propositions – Speed to Market, Customer Intimacy, Operational Excellence</li> </ul>	<ul style="list-style-type: none"> <li>– Enterprise Architecture</li> <li>– ERP</li> <li>– CRM</li> <li>– Supply Chain Management</li> </ul>	<ul style="list-style-type: none"> <li>– Activity Based Costing</li> <li>– Six Sigma</li> <li>– Buy vs. build</li> <li>– Process Redesign/ Reengineering Methods</li> </ul>
3rd Wave - Business Process Management	2000 - 2015	<ul style="list-style-type: none"> <li>– Assessment, Adaptability, &amp; Agility</li> <li>– 24x7 Global Business</li> <li>– Continual Transformation</li> </ul>	<ul style="list-style-type: none"> <li>– Networked Organization</li> <li>– Hyper Competition</li> <li>– Market Growth Driven</li> <li>– Process Effectiveness over Resource Efficiency</li> <li>– Organizational Effectiveness Over Operation.</li> </ul>	<ul style="list-style-type: none"> <li>– Enterprise Application Integration</li> <li>– Service Oriented Architecture</li> <li>– Performance Management software</li> <li>– BPM Systems</li> </ul>	<ul style="list-style-type: none"> <li>– Balanced Scorecard</li> <li>– Self Service &amp; Personalization</li> <li>– Outsourcing, Co-Sourcing, In-sourcing</li> <li>– BPM Methods</li> </ul>
4th Wave - Digital Transformation	2015 +	<ul style="list-style-type: none"> <li>– Process/ Product Innovation by Creative Use of New Technology,</li> <li>– Using Disruptions as New Possibilities not Problems</li> </ul>	<ul style="list-style-type: none"> <li>– Added Value to Old Customers/ Products,</li> <li>– New Value through New Business Models</li> <li>– Radical change driven by Technology and Shift in Mind</li> </ul>	<ul style="list-style-type: none"> <li>– AI; Big Data; Cloud Computing;</li> <li>– Data Analytics,</li> <li>– Implantable technologies</li> <li>– IoT; Smart cities; 3D print; Driverless cars</li> <li>– Robotics</li> <li>– Block chain</li> <li>– Sharing economy</li> </ul>	<ul style="list-style-type: none"> <li>– Process Oriented Applications (POA)</li> <li>– Intelligent BPMS Systems</li> <li>– Software as a Service</li> <li>– New DT Methods</li> <li>– New DT Tools</li> </ul>

(Lusk, Paley and Spanyol, 2005 upgraded in 4<sup>th</sup> wave and Digital Transformation by author)

#### 4. CONSLUSION

Business Process Management and Digital Transformation has lost in common like the necessary change in process and mind of people, use of new technology to boost process performance. All three BPM waves was made in their time with available technology and organizational knowledge of that time. According to all researches made in this literature review it seems that Digital Transformation could be the next wave of BPM. DT is mainly organizational thing, with need for people to shift in mind and in creative way use the new technology to change the essence of how they do the job. With possibility to mix and use new technology in numerous ways making new business models available. Those who could change in mind in such a way they would have the leverage to use full potential of even disruption in process or business in their favour. Digital Transformation in real sense of word needs to be firstly transformation secondly digital and it's arise as a new opportunity for BPM to make the promised results and change the business as we know it. Future research needs to be done to find more similar views on 4<sup>th</sup> BPM wave and confirm the premise that DT would really be the new wave, but that is something to do in future research.

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## LINGUISTIC DIVERSITY IN MOROCCO: AN OVERVIEW

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### **ABSTRACT**

*Morocco, a country as old as humanity, has always served as the shelter of various civilizations and has been the intersection for various sources. This very fact had a great impact on its linguistic and cultural landscape. The present article seeks to shed light on the linguistic diversity in Morocco. It tries to show the different, and sometimes interrelated languages and local varieties used by Moroccans in their everyday communication and how these languages and varieties, although each of which plays a specific role in the society, form a smooth continuum.*

**Keywords:** *Morocco, diversity, linguistic, diglossia, Arabic, Tamazight*

### **1. INTRODUCTION**

Morocco, a country as old as humanity, has always served as the shelter of various civilizations and has been the intersection for various sources. This very fact had a great impact on its linguistic and cultural landscape. The present article seeks to shed light on the linguistic diversity in Morocco. It tries to show the different, and sometimes interrelated languages and local varieties used by Moroccans in their everyday communication and how these languages and varieties, although each of which plays a specific role in the society, form a smooth continuum.

### **2. LINGUISTIC DIVERSITY IN MOROCCO**

Morocco is located in North Africa along two coastal lines, i.e. the Atlantic Ocean and the Mediterranean Sea. Morocco, a country of which the history goes as far back as the beginning of humanity, has served as the shelter of various civilizations, namely the Phoenicians, the Romans and the Greeks through the French, the Spanish and the Portuguese. Starting from the 7th century, the Arabs entered Morocco bringing with them the Arabic civilization and the Islamic religion (Zrizi, 2018, Maliki et al, 2017). The language or linguistic situation in Morocco is a very complex one. Local and foreign languages and varieties come into play during Moroccan everyday communication and form a smooth continuum. However, there is an agreement among Moroccans as to the role and domain of use of each of these languages and/or varieties (Bentahila, 1983; Youssi, 1995; Marley, 2004; Ennaji, 2005, among others). Most Moroccans are said to be at least bilingual, if not multilingual (c.f. Saidi, 2014). In other words, in their interactions, be they in everyday communication or for official and professional purposes, Moroccans oscillate between various languages and varieties, namely Arabic and Tamazight, (the two official languages according to the Moroccan constitution) French and to a lesser extent English and Spanish, although the last two languages are gaining ground every year, especially for economic and business reasons (Chahhou, 2014 Sadiqi, 2012). When we speak of Arabic or Tamazight, however, we should be wary of believing that what we have here is one Arabic and one Amazigh. Instead, we have many Arabics or, to use the sociolinguistic term, many varieties of Arabic.

Bentahila (1983), Ennaji (1994, 2000d) and Youssi (1995) speak of Classical Arabic (CA), Modern Standard Arabic (MSA), Median Arabic (MA) and Moroccan Arabic. Classical Arabic, it should be noted, is sometimes referred to as the lingua franca of Arabs. Given that it is the language of the Holy Qur'an in particular and religious discourse in general, it benefits from a prestigious status within the Moroccan Speech community (Chekayri, 2006). It is rarely used in everyday communication or at school, simply because only a limited number of people can use it properly. In addition to CA, there is MSA, which is the language used as a means of education at schools and universities, in media outlets and in official and administrative documents. This variety, in turn, is not used by all Moroccans and is no one's mother tongue. Middle Moroccan Arabic or Median Arabic (Bentahila, 1983; Youssi, 1995; Ennaji, 1994) is especially used as a means of communication between strangers for formal and official purposes. Most Moroccans can understand this type of variety, although not all of them can use it in their everyday spoken or written communication. The last variety, the one that is spoken by the majority of Moroccans, is Moroccan colloquial Arabic, or what is referred to as Darija. Yossi (1995:29) states that about (90%) of Moroccans use it, for it is the mother tongue of most Moroccans and is the variety used at home, in the street and for intimate purposes. The same holds true for Berber or Tamazight. Speaking of Berber language does not mean that there is only one variety of Berber. In fact, there are various varieties spoken in different geographical areas. These varieties are Tarifit (rifain variert) used in the north-eastern region of Morocco, Tamzight used in central Morocco and Tachelhit (also referred to as Tassoussit) used in the south-eastern region of Morocco (Boukous, 1995; Boukous, 1998; Erriahi, 2008; Lafkioui, 2018). Some say that they are sometimes mutually intelligible, but at times speakers of the three varieties hardly understand each other. In Morocco, Berber or Tamzight has acquired the status of official language, and is written using a script or alphabet which is generally Latin based or Arabic based and which is said to trace back to ancient times (Chakrani, 2013; Lafkioui, 2018). Many psychologists and social psychologists have pointed out to the distinction between "compound" bilingualism and "coordinate bilingualism". According to Diller (1970: 254-261), for example, compound bilinguals do not have independent grammars for their first and second language. Instead, when they learn a second language, such a language remains dependent on (i.e., compounded to) their first language. That is, they eventually become balanced bilinguals given that their ordinary conversations are usually indistinguishable from that of a native speaker of one the two languages. Coordinate bilinguals, on the other hand, are people who learn two languages in two completely separate contexts; therefore, the grammars, the semantic and cultural loads are completely independent. For this reason, they might find translating between the two languages difficult (See also Shaffer, 2002). Having said this, we can say that Berbers in Morocco are balanced, natural bilinguals in so far as they acquire Berber and Moroccan Arabic in the same context and as if the two languages were two mother tongues. Ferguson (1972) defines diglossia as a situation where two or more varieties coexist in a speech community; the domains are usually parcelled out in a complementary distribution. In other words, in addition to the speech community's everyday or vernacular language variety, (referred to the 'low' variety), there is a second, highly codified and more prestigious variety (referred to as the "high" variety). This variety is used in certain domains, namely literature, formal education, or other specific settings, but not in day-to-day communication. In the light of this, we can say that Standard Arabic and Moroccan Arabic stand in a diglossic relationship. They have different functions and are associated with different contexts and for different purposes. While Standard Arabic is confined to formal situations and is used for writing purposes, Moroccan Arabic is used as a means of "self-expression in the closely personal and intimate environments since it is the vehicle to convey the shared cultural values and emotions (Young and Helot, 2003:235). The substitution of one for the other is seen as odd by native speakers and can sometimes lead to humorous and funny situations (see Housni et al , 2018; Housni et

al, 2019). In addition to the varieties of Arabic we have mentioned so far, many linguists invoke another variety when speaking of the language situation in Morocco. This variety, which is not codified or standardized, share some features with Classical Arabic, Modern Standard Arabic and Moroccan Arabic. In other words, its grammar is similar to that of Moroccan Arabic, its lexicon is a combination of words from the three languages (Saidi, 2014). Youssi (1995: 29) refers to this variety as Middle Moroccan Arabic, which is the “‘educated’, exclusively spoken’ [variety] used between strangers for formal, official purposes. Ennaji (2005), in turn, labels this variety differently and refers to it as Educated Spoken Arabic and defines it as a sophisticated, polished way of using colloquial Arabic and of which the lexicon has something in common with that of standard Arabic. According to Sayahi (2017), even if the genetic relation between the varieties concerned is important in defining diglossia, this concept has always been extended to subsume situations of complementary functional distribution between languages that are not genetically related. The complex functional distribution between the different varieties of Arabic on the one hand and, the varieties of Berber language and the other European languages, on the other hand, is an illustration of extended diglossia. The relative levels of prestige of each of these varieties, as Moustauoui Sghir (2016) argues, play a vital role in the functional distribution of the languages and varieties prevailing in the Moroccan linguistic landscape.

### 3. CONCLUSION

This being the case, the relationship between the different varieties of Arabic, the varieties of Berber and French constitutes a situation not only of diglossia, or triglossic, but also a situation of quadriglossia, a fact which clearly shows the sociolinguistic dynamics of change which, for their part, are to a large extent impacted by a plethora of political, ideological and social factors (Moustauoui Sghir (2016). Decision makers and language planners should therefore take these new situations into consideration, so that they can make well-informed decisions and avoid provoking more controversies when it comes to the choice of the language of instruction.

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# TOWARD A MACROECONOMIC FRAMEWORK FOR ISLAMIC ECONOMY

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## ABSTRACT

*Islamic finance is part of a larger framework that is called Islamic economics (Causse Broquet, 2012). This concept is inspired by practices dating back to the early centuries of Islam but wasn't called that way until the twentieth century. Also, the existence of an economic system and economic thought in the Islamic world is quite ignored in Western thought. "In his History of Economic Analysis J.A Schumpeter wrote:" Regarding our subject (the economy), we can safely cross five hundred years by one leap, to the time of Saint Thomas of Aquinas (1225-1274) "(Verrier, 2004) ... Thus, the various aspects of the economic system should be demonstrated so it can be regarded as a complete system. First, there are elements of Islamic jurisprudence relating to economic matters to understand how Islamic economics can be described as a system. By analyzing the history of Islamic thought, we discover that the concepts of cycles, of crises, monetary and fiscal policy, financing of the economy, state regulation, taxation, social institutions, financial markets ... are far from being strange to Islamic economics. Islamic finance is now one of the main illustrations of the Islamic economic system and its institutions and components are numerous and complementary. Among these institutions we discuss Islamic financial institutions, takaaful insurance companies, waqf (sustainable charitable system), Islamic microfinance, Zakat and Islamic financial markets. Understanding the functioning of these institutions will enlighten our analysis initiated by a more conceptual perspective. A Graphic will illustrate our overall summary of the pillars, components and part of Islamic economic system.*

**Keywords:** *Economic system, Islamic economic system, Islamic finance, macro-economy*

## 1. INTRODUCTION

As part of the extensive circle of the human sciences, Islamic economics, especially Islamic finance, is based on a number of axioms, theories, rules and guidelines that govern it. In the tradition of this kind of science, these principles are subject to debate for some of them. This alternative economy, new but whose principles date back to the arrival of the last of the prophets more than fourteen centuries ago, remains poorly documented when it comes to presenting it as an integrated economic model that leverages on full fledged and complementary institutions. The questioning of the very existence of an Islamic economic model is the fact of Western thinkers as well as Muslims. The main reason behind this questioning is that Islamic economics is often presented as a series of prohibitions, which would be implanted on a capitalist economic system already in place and rooted in our modern societies. This representation actually raises more questions than anything else. If one assumes that capitalism is an economic system, as would Marxism, in full part, the representation described earlier implicitly assumes that Islamic economics is not a system, that is to say, it is not a set of elements that interact with each other according to known principles and rules. We must remind that a system can be defined as "The organized set of principles coordinated in a way to form an scientific whole or a doctrine" or as a "set of elements considered in their relationships within a whole operating unitarily" but also

as a "set of processes, organized practices designed to ensure a defined function" (Larousse)<sup>1</sup>. An economic system is defined by the Larousse<sup>2</sup> dictionary of the economy as a: "Interdependent set of institutions (law, property) governing the activities and economic behaviour, in general in the national space. Systemic analysis defines a system as a set of elements in reciprocal relationship and in relation to its environment. It emphasizes the concepts of interdependence, coherence, permanence through changes and evolution. It extends Aristotle's thesis that the whole is more than the sum of its parts. In the field of economics, the concept of system applies on many levels. The organization or the firm, a local or regional set of activities, a branch or sector, national or even global economy can be analyzed in terms of system. These different levels may be considered both in their relative autonomy and their interdependence, a system which breaks down into subsystems, and so on.

Two large modern historical orders have been analyzed as economic systems:

- Capitalism is characterized by private ownership, coordination by the market, wage labour (Marx) or the role of the entrepreneur (Schumpeter).
- Socialism is defined by state ownership, plan or vertical coordination, the shortage economy. The approach in terms of system considers the links between institutions, behaviours and evolutionary trends in the major economic blocs. It seeks to link economic analysis and historical approach. "

The definition implicitly acknowledges that there are only two economic systems today. If we take the elements outlined by all these definitions, assuming that Islamic economics is not a system would mean assuming that it does not have sufficient principles, necessary theories, adequate institutions or appropriate practices intrinsic to any system. We will then ignore some of the constitutive elements of Islamic economics, such as, the financing of the economy or social solidarity and the system of wealth redistribution. Deficiencies may also be on the side of principles and boundaries, necessary elements for the identification of any system, that define what belongs and what does not belong to the system. Finally, there could be gaps in the conceptualization of interactions between the Islamic economic system and its environment, with its regulator. Let's specify first what we mean by our distinction between Islamic economics, capitalism and Marxism, an institutional distinction and operating principles distinction. At no point will we analyze the utility functions, the consequences of the accelerator or the investment multiplier, because we start from the hypothesis that human behaviour at the micro and macro level falls more under the natural laws than that of systemic choices (although analysts disagree on the causes, characteristics and consequences of these laws, which gave rise to the many economic theories). Selfishness, utilitarianism, the propensity to save or the consequences of an additional demand are phenomena explained by the economy and not imposed by the latter. The individual will always have a modest preference for liquidity in a crisis, no matter where he lives and the economic system under which he lives, because that is the protective instinct that activates. However, what radically differs from one system to another, are on one hand the guiding principles and laws, and on the other hand the major institutions and the role of the regulator (the State, in most systems). We should note that, for the clarity of the items that follow, the Islamic finance will be defined as a subsystem of Islamic economics. Islamic finance as an economic subsystem will be particularly related to the operation of financing the economy (banks ...), the insurance system, the functioning of financial markets... next to other subsystems, such as Zakat, the State and the Waqf, among others. Therefore being a theoretical construction built by the spirit on a specific topic, can Islamic economics be described as a complete and integrated system? Is it governed like any system by axioms, principles, proposals and conclusions that form the core of any system of

<sup>1</sup> <http://www.larousse.fr/dictionnaires/francais/syst%C3%A8me/76262> (3/9/15)

<sup>2</sup> <http://www.larousse.fr/archives/economie/page/237> (3/9/15)

thought, any scientific doctrine? Does it contain enough methods of organized processes, components and institutions to ensure sustainable functioning of the economy and society? What are the most crucial laws in this system? First, we track down the history of the Islamic economic system and its jurisprudential foundations before analyzing in more detail the economic jurisprudence in Islam. Then we analyze the positive principles of Islamic economics and its theoretical framework illustrated by the evolution of thought in this area. Finally, we will detail the different components and institutions of Islamic economic system, with some emphasis on Islamic financial institutions and their products, as the leading institution of Islamic finance, the best known subsystem of Islamic economics.

## 2. SOURCES AND JURISPRUDENTIAL FOUNDATIONS OF ISLAMIC ECONOMICS

Apprehending a system needs to go through the essential stage of identifying its theoretical foundations and guiding principles. In the case of the Islamic economic system, it is about the Islamic jurisprudence, its sources and its principles. These elements will be detailed after a brief historical overview of its evolution.

### 2.1. History

If one is led to speak about the first doctrinal writings related to the modern conceptualization of Islamic finance, it is at the early twentieth century that we will have to situate it (Chepellière, 2009), particularly with Al Mawdudi<sup>3</sup> and Sader<sup>4</sup> (Gamal, 2006), although the Islamic legislation continues to this day with the *ijtihad* (Khallaf, 1999, quoted by Abu Hamdan, 2013). This was mainly in response to the colonial movement bearing the banking system within itself that these currents have emerged. However, the sources and foundations of the discipline were situated in the early eighth century with the spread of Islam and the science attached to them. Thus one can identify since the second century AH a whole literature on the economic thing as "Al Kharaj" (Tax) Abu Yusuf or "AL Iktisab finAl Rizq al Mustatab" of Chaybani. This is the beginning of a long tradition that often mingled social science and economics for which we can identify a number of key thinkers such as Al Maqrizi who explains the Egyptian financial crisis of his time to causes mainly related to the monetary policy, which he discusses in great detail<sup>5</sup>, or Ibn Khaldoun that evokes the main features of the theory of cycles in his "Prolegomena" (Al Muqaddima). This tradition is usually omitted in the treaties of western economy. "In his History of Economic Analysis JA Schumpeter wrote:" Regarding our subject, we can safely cross a bound five hundred years until the time of St. Thomas Aquinas (1225-1274 ) ", a curious historical and philosophical non sense from such a thinker (Verrier, 2004)... In its modern version, Islamic economics has mainly expressed through its most accomplished subsystem, namely Islamic finance. The latter itself is dominated by the leading institution that are IFIs<sup>6</sup>. "We can not grasp the meaning, origins and foundations of the IF, if we do not return to the school (or current) of Economy in Islam, as it is called by Sader (1987)" according to Abu Hamdan (2013, p68). We should also stress on the importance of distinguishing between the two levels of this discipline, theoretical and practical. In 1956 was established a first investment fund that complies with Islamic principles in Malaysia, while in 1963 in Egypt and especially in Dubai in 1975, are created the first private IFIs, the Islamic Development Bank being quite a unique and transnational institution, founded by the OIC<sup>7</sup> in 1974. The Islamic economy gets fashionable again with the Iranian revolution of 1979 which is followed by the Islamization of the entire economic system in 1983, which was preceded by Sudan in 1979 (Khan & Mirakhor,

<sup>3</sup> <http://www.britannica.com/biography/Abul-Ala-Mawdudi>

<sup>4</sup> <http://www.bostani.com/livre/notre-economie-mohammad-baqer-al-sadr.htm>

<sup>5</sup> <http://www.universalis.fr/encyclopedie/al-maqrizi/>

<sup>6</sup> IFIs : Islamic Financial Institutions

<sup>7</sup> IOC : islamic organisation of cooperation

1990). These countries are to date the only governments to have an Islamic economy in the sense that even the monetary authorities, central banks, regulators, financial markets and other financial institutions are fully under the Islamic economic framework. In the rest of the Muslim countries, we observe either a liberal system (the entire frame is conventional and allows Islamic institutions run by their rules) or a dual system in which each sub-system as the competent authorities dedicated to it. Currently, it is the crises that have made the Islamic finance fashionable again, especially that the latter maintains a double-digit growth rate (28.9% according to S&P 2010). There are now nearly 500 institutions operating within the framework of Islamic finance in the world, 35% in the Gulf. Many European countries have developed their legal system to accommodate Islamic finance and launched university courses in this purpose.

## **2.2. Primary sources of Islamic jurisprudence**

### *2.2.1. The Koran*

The Koran is the holy book commonly shared by all Muslims. It is considered by them as the divine word (Alwani, 1990), transmitted by the angel Gabriel to the prophet Muhammad. There is only one version of the Quran everywhere because the book is deemed authentic and never altered since it is based on a double transmission: written (after the death of the Prophet) and especially oral (a very large number of different narrators that memorized it by heart). There exist several readings (variations on the vocal and pronunciation), which all belong to the same original book, which is currently available in the Muslim world. The Koran is a book whose aim is mainly to guide the individual to make the right choices during his stay on earth. It nevertheless contains certain verses of legal order. To better understand the Koran, from the point of view of these verses of legislative scope, it is necessary to master a number of tools without which the reader can quickly be faced with apparent contradictions, incomplete or ambiguous elements. These tools include primarily the ability to differentiate the global scope verse and the one with specific scope (aam / khaass) the abrogating verses and verses abrogated (naasikh / mansookh), the verses revealed in Mecca and those in Medina (it was during the time at Medine when the majority of verses in social significance, economic, legal and politics were revealed) (Abu Hamdane, 2013, p39) ... It is also noted that for a full understanding of these verses of a legislative range, it is necessary to return to their practical application, that is to say the way in which the Prophet put them into practice and the way in which his companions have applied them. This is the Sunnah, the tradition, composed of narrations, "hadith".

### *2.2.2. Hadith*

First, we note that contrary to the Koran, the hadiths are not combined in a single shared corpus, distributed and widely accepted in the Muslim world. We can even say that because of this delay of compilation, due according to Khallaf, (1999) to the will of the Caliph Omar to avoid confusion between the Qur'an and Sunnah, many currents have emerged in the Muslim world. Sunnah, despite having been learned and recorded largely during the lifetime of the Prophet, has been compiled and collected in books devoted to it only in the second century of the Hegira, beginning with the Imam Malik, and then Shafei and Ahmad, Bukhari, Muslim ... During the first two centuries, the effort was geared toward the collection. During the centuries that followed, the main effort was oriented toward the treatment and selection, through a number of tools, to separate the authentic hadiths from those who are weak, misleading or apocryphal. Thus emerges an Islamic science called Hadith Studies whose main founders lived in the second century of the Hegira (Malik, Shafei, Ibn al-Madini, Ibn main, Ibn al Mubarak, Ahmad, Bukhari...). This science, still exists and is still practiced, among the most famous contemporary ones we can report Al Arnaout or Al Albani, hadith scholars of the twentieth century. The Sunnah is the second source of Islamic jurisprudence and is considered as such by all the Sunni

schools without exception. Shiism has differentiated itself by positioning itself as a separate school of thought that develops its own sources of jurisprudence. Sunnah contains the words, deeds and validations (iqraar) of the Prophet (Causse-Brocquet, 2012, p27). Only the authentic sunnah and hadith authenticated by specialists is considered acceptable evidence in the jurisprudential issues. Incidentally, the number of false hadiths, forged or weak is greater than the number of authentic hadiths and recognized as such. However, questions may arise, in front of which the scholars have no explicit or clear text from the Quran and Sunnah, this is where comes in the jurisprudential effort, *ijtihad*.

### *2.2.3. The Ijtihad and its sources*

Meaning "reasoning effort", *ijtihad* consists for the scientist to make every effort on the basis of the Qur'an, the Sunnah and a number of other sources to arrive at a fair judgment regarding a particular issue on which there is no clear text (Alwani, 1990). We straightaway, note that Ibn Hazm and the whole school called "Dahiry" (literalist) reject all other sources of *ijtihad* and confines itself to merely two main: the Koran and the Sunnah (Khallaf, 1999). The other schools of jurisprudence, including the four Sunni schools all consider the *ijmaa* (scholarly consensus of a given time) and *qiyaas* (analogical reasoning) sources of jurisprudence. After these two related sources, each of the four schools has specific sources, some of which it shares with other schools, some not. The order of the sources also varies. It is worth noting that at this stage of the jurisprudence, it is mainly a question of secondary elements in the Muslim religion, primordial, fundamental and major elements all being decided by clear and unambiguous texts. It is also worth pointing out that scholars believe that in the presence of an authentic text, clear and unambiguous and to which the context of the issue raised is the same as the context at the revelation, there is no room for *ijtihad*. The fatwa based on *ijtihad* is reserved to scholars who have reached a certain degree of knowledge of the various Islamic sciences (equivalent to two PhDs in general) and have been recognized by their peers as being competent enough (*ijaza / tajkiya*).

## **2.3. The economic jurisprudence or jurisprudence of transactions**

### *2.3.1. The objectives of law*

The transactions' jurisprudence can possibly be described as subsystem of Islamic jurisprudence. It therefore follows the same rules, the same sources, the same tools and the same principles as the latter. It has specific goals that Ibn Achour noted in his book "The objectives of sharia." Beforehand, let's note that some scholars have been preoccupied with the issue of objectives by trying to summarize the purpose to identify the main objectives of shari'a. The aim therefore is to answer the question: what are the objectives of the creator through the institution of Sharia law? Shafei Jurists (Sourdel and Sourdel 2004, P417) as Juaini Al and Al Ghazali and especially Shatibi (Maliki) identified five major objectives as follows:

- Maintaining the purity of religion and monotheism
- Preservation of Life
- Preservation of intellectual abilities
- Preservation of descent and filiation
- Preservation of wealth (including private property)

Some scholars added universals that they judged as important as these five universals, let's cite precisely the preservation of honor (drawn from several sacred texts) and the love of God and his Prophet. In order not to spread out more on these universals, it must be said that these are the result of inductive analyzes conducted by scholars on the global nature of the Shariah texts and their alleged objectives. Regarding the field of economy, we will focus especially on the fifth universal principle namely the preservation of private property and money.

This universal principle was developed by Ibn Achour, a famous tunisian scholar and exegete of the early twentieth century, is declined in five sub-principles, as follows:

- Continuous Circulation of wealth and fighting monopoly
- Fluidity and transparency in commercial transactions and contracts
- Protection of private property
- Protection of the freedom to dispose of ones wealth
- Justice and relevance in the use of money (origins and purposes)

These are universal principles from a wide induction process from the whole texts of Islam relating to the economy. They allow having a fairly clear idea about the principles underlying Islamic economics and the directions it takes. The demarcation is clear with the socialist system / Marxist through in the third and fourth goals. The first is in itself at odds with the observed practice which is the result of two centuries of capitalism. The second goal was a very social and common perspective to the extent that it helps prevent possible dissension. The fifth objective has a dual scope, individual and collective, and fully include the preservation of the environment and sustainable development within it.

### *2.3.2. Jurisprudence of transactions and contracts*

Contracts are considered sacred in Islam, as long as they do not contravene with the supreme principles of Sharia. Thus, a verse from the Koran states "O believers, observe your commitments" (Al Maida, 1) as well as a famous hadith states: "The believers are obliged to respect their provisions (in contracts), except a clause making licit the illicit or licit the illicit" (Tirmidhi 1352). Also, contracts are characterized by the unity of time, place and object. It is prohibited to conduct "Two agreements in one". They come in several categories (which will also be detailed):

- The contracts of exchange of goods or services
- The employment contracts (provision of capital, labor ...)
- The contracts of donations (transfer of rights without particular benefits)

One of the fundamental objectives of sharia is to avoid any possible conflict that can arise from a poorly crafted contract. Six main conditions (Iqbal 2007) must exist for the contract to be deemed valid:

- The mutual acceptance
- The qualification of contractors and maturity
- The lawfulness of the object of the contract
- The possession of the object of the contract (with rare exceptions)
- Knowledge of clauses and transparency of the transaction
- The ability to deliver the object of the contract (for exceptions to the condition 4)

We can synthesize the long explanations of the types of transactions made by the scholars in the following dual input table (only not ribawi<sup>8</sup> goods).

*Table following on the next page*

<sup>8</sup> Ribawi goods: There are six categories of goods that can be found listed in many authentic hadiths and on which the trading conditions are more stringent than the rest, since they represent the exchange tools (currency) and basic necessities

*Table 1: Types of transactions in the jurisprudence*

	Good or Service VS Good or service	Good or Service VS Money	Money VS Good or Service	Money VS Money
<b>Immediate exchange</b>	Barter, lawful.	Sale, lawful.	Sale, lawful.	Foreign exchange, lawful.
<b>First immediate and second later</b>	Deferred Barter, lawful	Deferred sale, ( <i>Bai aajil</i> ), lawful	<i>Salam</i> Sale, prepaid, lawful under condition	Forward exchange, unlawful.
<b>Both éléments exchanged later</b>	Future sale, unlawful.	Future sale, unlawful.	Future sale, unlawful.	Future exchange, unlawful.

Regarding the ribawi goods, a simplifying table allows to summarize the conditions of exchange:

*Table 2: Terms of trade in ribawis goods*

	Gold	Silver	Wheat	Orge	Dates	Salt
Gold	= Q T	= T	OK	OK	OK	OK
Silver	= T	= Q T	OK	OK	OK	OK
Wheat	OK	OK	= Q T	= T	= T	= T
Orge	OK	OK	= T	= Q T	= T	= T
Dates	OK	OK	= T	= T	= Q T	= T
Salt	OK	OK	= T	= T	= T	= Q T

Legend:

**OK:** means that it is possible to make an immediate exchange or postpone one of the two counterparties, and it is possible that the counterparties differ in terms of quantity. Example: salt against money (or currency), it is possible to sell immediately or defer delivery either of salt or the payment, but not both, otherwise it would be part of a prohibited future sale. The equal quantity is not required.

**= T:** Means that it is possible that the two goods are exchanged in unequal quantities, but the transaction must be immediate (spot), otherwise it is not valid.

**= Q and T:** Means that this transaction was not supposed to exist, and if it takes place, there must be strict equality of exchanged quantities and this should be done in spot. Example: Replacing a 24 karat pure gold bracelet containing nothing but gold, against a collar made of pure 24 carat gold containing nothing but gold. For this exchange to be valid, the weight of the two objects must be strictly identical, and the transaction should be spot. Otherwise, there are a number of conditions that is not specifically useful to develop here.

### 2.3.3. Key prohibitions in commercial transactions

#### 2.3.3.1. Interest

We should know that in Islam, there is no difference between usury and interest, at least from a conceptual point of view. Besides, this ban is an extension of the one found in the Judaic tradition "The just does not loan out his money at interest" Psalms 14: 4, but also in Tarbit Exodus and Leviticus 22/25 25 / 34-46 . We note also that in the Christian tradition, Mathiew 21/12 and Luke 6/34-36. Any interest, no matter how small it is, is considered usury by the

jurists of Islam<sup>9</sup>. There is near unanimity on that point between old and contemporary scholars, apart from some controversial fatwas (legal opinions), such as the one issued by Tantawi<sup>10</sup> (Rodenbeck 1998, P241), but was quickly denied by all scholars<sup>11</sup>. The interest is any excess of the capital lent by the lender that the borrower was forced to pay. The Arabic word "Riba" means the surplus (Abadi, 1995). It turns out that we find this same design in Christian definitions of usury: "There is usury when we ask in return more than what we gave." Bishop Ambrose considered usurers would be denied eternal peace. The Christian council who met in Paris in 1312 simply demanded the excommunication of the seculars guilty of lending at interest (Martens, 2001). Specifically, the interest is divided into two categories in fiqh: the interest related to time "Riba AlDuyun" and interest related to unequal and unfair trade in currencies and certain commodities "Riba AlBuyu ". Both types are prohibited (Khamlichi, 2010). The first means, as the name suggests, the borrower pays a surplus in consideration of the time (or time extension) of the loan, as do all the conventional commercial banks today for the loan. In Islam, the repayment of a loan must be limited to the capital borrowed "If you repent, then you are entitled only to the principal (or nominal capital, excluding any surplus interest)" as stated in the Qur'an 2/278<sup>12</sup> and several authentic hadiths<sup>13</sup>. The second type of interest regarding specific assets (including gold, silver, wheat, barley, salt, dates) to be exchanged immediately, and in equal amounts when it is the same type of property (ie gold against gold, silver against money, etc.), which also significantly limits speculation on these goods. These were detailed in the previous table, 1.c. We can also develop the socio-economic causes of the prohibition of interest like inflation, rising inequality, eviction, loss of social solidarity, amplification of economic cycles... But the purpose here is mainly to focus the analysis on the elements related to Islamic jurisprudence.

#### 2.3.3.2. *Prohibition of gharar and maysir (gambling)*

The notion of gharar led to many controversies on its definition (Causse-Broquet, 2012, p32). Some translate it in major uncertainty and others by uncertainty per se. In reality, it is difficult to translate this word, and quite complex even using circumlocution. The gharar represents two things to the contract:

- Either an uncertainty over the structure (form) of the contract, that is to say, the contract is based on a game of luck, on a major hazard (two sales in one, sale suspended to an uncertain event, future sales, sale of an option...)
- Either an uncertainty on the substance, that is to say that the main object of the contract is uncertain (random object among many, ignorance of the precise characteristics of the object, uncertainty about the occurrence or the possibility of delivering the object, ignorance about the price ...)

This categorization, taken from the thesis of Abu Hamdan (2013, Annex B1) which fully addresses the gharar, helps identify this notion. Scholars have conducted a gharar categorization and inventory of the conditions which make it lawful or unlawful gharar. Indeed, the prohibition of the gharar is less acute and "serious" in Islam than the interest, which does not however come

<sup>9</sup> Some Muslim jurists from 36 countries met in 1965 at the University of Al-Azhar to put the record straight and end a controversy that has grown significantly. See the collection of work of the Second Congress of the Islamic Research Council, Al-Azhar University, Cairo, Egypt, 1965, 401-02

<sup>10</sup> Former president of Al-Azhar University

<sup>11</sup> Councils involving experts of the Islamic jurisprudence as well as experts from various fields. They meet to address issues of major importance for the Muslim community

<sup>12</sup> "O believers, fear God and forsake what is left as interest if you're really faithful. If you refuse, then expect a war from God and his prophet, and if you repent, then you are entitled to the capital, you will not wrong and you shall not be wronged" Baqarah / Koran

<sup>13</sup> « God curses the one who takes interest, the giver, one who writes its contract and the two witnesses, they are equal (in the curse) » Sahih of Muslim, hadith n° 1598

out of the sphere of explicit prohibitions. The hadith on the subject states: "The Prophet prohibited the gharar sale" (Muslim, 1513). The gharar is considered unlawful if three conditions are met:

- It must be part of a business transaction and not a donation
- It must be the object of the agreement and not an accessory element (like a box in the garage while the object of the transaction is the whole house)
- there isn't a great need for this transaction (as in the case of eggs, for example, where it is unthinkable to ask the seller to open it, even if the consumed object is inside the egg whose validity is not exactly known at the time of purchase).

If one of these conditions does not apply to the transaction studied, it is then no longer considered unlawful. Regarding the maysir, its ban is supported by verses 91 and 92 of Chapter Al Maida of the Koran, and is commonly known and accepted in the Muslim world. In a spirit of synthesis, we don't find it useful to develop here the reasons why Islam prohibits betting, gambling (virtual trackers in stock markets, lottery, racing, bingo)... This ban of maysir will impact enormously the world of stock exchange through the shelving of a number of derivatives and highly speculative tools.

#### *2.3.3.3. Some other prohibitions*

1. Among the banned items are obviously included all contracts involving illegal objects (alcohol, tobacco, pornography, drugs, interests, pork ...).
2. We can also recognise the prohibition of debt trade, already mentioned in the table of exchanges that we drew up earlier.
3. We also note that the monopoly is banned by the 1605 report narrated by Muslim in his authentic hadith collection.
4. Price fixing by the state, since it distorts the free market rules, which the state must also ensure transparency and the absence of collusion or manipulation.
5. The fraud, which is considered a betrayal of honesty and transparency necessary in trade.
6. The stock market speculation on commodities, because it is against the basic rule of trade in goods which is moving the good between two transactions.

### **3. PRINCIPLES AND FRAMEWORK OF THE ECONOMIC AND ISLAMIC FINANCIAL SYSTEM**

The foregoing allowed getting a better idea of the theoretical jurisprudential framework governing the transactions in Islamic economics, let alone in Islamic finance. Islamic finance is therefore an industry that aims being alternative and ethic. It thus has its roots in Islamic jurisprudence, the Koran and the Sunna are the first sources (Causse-Broquet p25). It is based on several principles, including the need to back any transaction with real assets, the prohibition of the gharar and maysir, the need to have the object of the transaction lawful, the obligation to share profits as well as losses and also the prohibition of interest. The bans have been discussed in the previous section; we therefore propose to look more in details at the positive principles, most of which are drawn from a number of jurisprudential rules that synthesize many Quranic and prophetic texts which govern Modern Islamic finance.

#### **3.1. Foundations of Islamic finance**

##### *3.1.1. Need to share the profits and losses*

Cited particularly by Causse-Broquet, (2012) and Dar & Presley, (2000), this first principle follows directly a rule that can be considered as cardinal in Islamic finance. This rule is indeed a pillar that will govern a very large part of fatwas. The latter is itself derived from a hadith stating "Any profit on a good or service must be strictly attributed to the person who bears the

risk and the costs of that good or service, when the profit is generated" (Al Kharaaj bi ddamaan) (Tirmidhi, 1285). Thus, unlike the classical interest on the loan transaction in which it is the borrower who bears the risk of the amount paid in case he loses or it is destroyed even though it is the bank that draws a certain profit, Islam imposes to share both profits and losses in a more participative transaction. If the funds provider agrees to finance a contractor for a project, they will share profits and losses under specific conditions that will be detailed once we discuss the components and transactions of Islamic finance. Sharing profits and letting only one party bearing risks violates the spirit of justice that governs Islamic jurisprudence. The (legitimate) risk and time are considered as "dependent" factors of production alongside other independent factors of production (land, money capital, physical capital and labor) according to Abu Hamdan, (2013, p135).

### *3.1.2. Obligation to operate within an ethical framework*

This principle is based on a set of texts and teachings related to sharia in general and the jurisprudence of individual transactions. Among the text establishing this principle we can mention the hadiths "None of you will reach the belief until he wishes for his neighbour what he wishes for himself", "If the judgment day arrives and one of you has a shrub that is being planted, he shall continue his action and plant it ", " The most perfect believers are those with the highest morality " (Kettani)... Many texts and teachings thus dissociate the principles of Islamic finance and pure materialism. Materialism is not intended to be ethical, and it is the same for law. Therefore Ethics is a guiding principle that is an integral part of the framework in Islamic economics. Note that in practice, some principles are privileged compared to others, especially when they are related to a clear and tangible concepts such as the prohibition of interest, that's why ethics remains a less circumscribed and comprehensive concept, therefore it is less emphasized.

### *3.1.3. Obligation to back any transaction by real assets*

Among the most important criticisms pointed at contemporary finance is the disconnection with real economy. Analysts often emphasize the "virtuality" of finance. Studies of financial exchanges in relation to actual physical economic flows are indicative of this separation. The observer may conclude that the financial sphere has become able to evolve independently of actual exchanges that are only indicators as they may be replaced by the thickness of raindrops or the daily wind speed. Bets and derivatives can be based on any random variable as an underlying indicator. This possibility is immediately excluded by our principle, cited by Abu Hamdan (2013). In Islamic finance, it is necessary to couple any economic or financial transaction to a tangible asset (or real in the case of intangible assets). Thus, a promise can not be sold, as for for options or *trackers*<sup>14</sup> whose price follows the evolution of a given index without buying real assets. Purely virtual transactions arising from replication of indices, derivatives squared, cubed or power n are not acceptable as part of an Islamic economic system.

### *3.1.4. Obligation to operate in the sphere of lawful*

One of the conditions for the validation of Islamic financial transactions refers to the lawful or unlawful nature of the contract. In Islamic economics it is not conceivable to structure a musharka partnership agreement to launch a casino, a tobacco factory or a nightclub. This framework is quite important if one wishes to speak of a complete system because the existence of borders and boundaries is a prerequisite for the validity of a system. If a set of elements interact with certain rules but without precise borders, all can be part of the system, which therefore does not make a system, in essence.

<sup>14</sup> Tracker : A tracker or ETF (Exchange Traded Funds) is a financial instrument traded to reproduce in real time the evolution of an equity index.

This obligation is materialized in practice by the presence of a sharia compliance committee, usually composed of experts in the discipline, which sits in each of the institutions, and rule on the validity of every particular transaction. The absence of this committee undermines the institution in the eyes of his particular audience.

### **3.2. Framework, economic environment, and state regulation**

#### *3.2.1. Business cycles*

A successful economic system cannot be established as long as it is not understood, sometimes apprehended and conceptualized by induction, sometimes by inference, that is to say from practice to theory, and vice versa. Among the major elements of any economy are the cycles and their analysis. The awareness of the existence of cycles is established from the first centuries of Islamic civilization, well before their theorization in the West. Miskawayh already evoked in the tenth century the existence of recurring economic cycles. "The phases of the cycle will begin to be described, even very briefly, by Al-Turtûshi (1059-1126) who nevertheless clearly distinguished the phases of prosperity and decline phases" (Verrier, 2004). It is with Ibn Khaldun that a detailed and meticulous description of the theory of cycles will arise through the distinction of the main determinants of a cycle, with links between population and production, and the role of public finances in this dynamic. According to him, the first phase, bottom, is an accumulative process and expansionist. "Ibn Khaldun's analysis combines all the main explanatory elements of a theory of growth: population growth, division of labor, technological progress, productivity gains, and the need for the State to respect the freedom of each, both in terms of private profit and private property. However, these same elements can generate a cumulative process down: the economic and political degradation phase" (Verrier, 2004). This cumulative process down materializes by the emergence of structural imbalances, such as negative externalities, the development of large cities at the expense of small, rural exodus, increased consumption at the expense of investment, opulence, excessive private and public spending, debt... This theory of growth and cycles developed by Ibn Khaldun is ahead of almost all the theories that preceded including Platonic. These reminders show how this fundamental aspect of economic theory, and therefore economic systems, was set up in the early centuries of Islamic civilization by different authors. Their analyzes have also evoked taxation.

#### *3.2.2. Taxation*

Islamic civilization has expanded rapidly, in less than a century, on three continents. Very quickly, the authorities needed to manage wealth and interregional and international trade through the establishment of a number of supervisory measures and taxes. Tax is in fact one of the main manifestations of the existence of the authority of the state. It would be difficult to imagine that an empire that stretched from Spain to China and India was not provided with appropriate economic and regulatory structures. As such, many works were devoted to this, as "Al Ahkaam assultaaniya" and many others. "From the eighth century, Al-Muqaffa (720-756 / 757) denounces the tax oppression" (Verrier, 2004). Al Mawardi (974-1058) recommends taking care of the tax base. In a similar register, "Al-Turtûshi (1059-1126) advocated the need to impose all its contributory capacity" (Verrier, 2004). Ibn Khaldun (1332-1406) often placed his observations and tax theories as part of economic cycles, pleading for a proportional taxation while Abu Yusuf had a much more interventionist vision in his book "Al Kharaj" in which he recommended that indirectly, the state takes into account the principle developed several centuries later by Laffer, namely the possible decrease, at some point, of income tax revenues if rates become excessive. The Islamic economic system, if seen through the jurisprudential principles and prophetic texts such as the refusal of the prophet to set prices for example, or the setting aside of taxes, can be termed as a market economy, in a given framework, which is not exactly the same as a capitalist market economy that places the capital or the freedom of agents

as the cornerstone of the system. In the Islamic economic system, the regulator must ensure the transparency of operations, the absence of monopolies, collusion, deception practices... The authorities did not intend to get involved in economic operations, but are especially called to ensure the best conditions of transparency. Thus, the perfect competition is an ideal in terms of structural principles of economics, we do not note any evidence of Islamic economics that imposes to have a diametrically opposite model. In any event, it remains a useful theoretical framework for many analyzes. The important thing is that the state is maintained in his classical posture (army, police, justice...). Alongside the tax items, currency, inflation, and their management, are among the essential elements in a viable economic system.

### *3.2.3. Money and Inflation*

"Contrary to what some may believe, currency notions, capital, profit, interest, value of time... are relatively well-known in pre-Islamic Arab practices" (Saleh 1992 & Mooti 2003 cited by Abu Hamdan, 2013). Currency, and its optimization is central to Islamic thought and this has already been mentioned when we discussed the two categories of interest (lending and exchange). The first category of goods whose trade is strictly framed within six categories are monetary assets (money). It follows from the text that the market should be geared more towards monetization, by gradually decreasing trade volumes based on barter, without the currency generating standalone profits (Oaidah, 2010) coupled with the time without going through a productive process (a very similar vision of the Aristotelian vision of currency) in Abu Hamdan, (2013, p71)). Economic fundamentals, such as Gresham's law, are introduced into the Islamic economic thought from the eleventh century, particularly with Al Ghazali (born in 1058). Furthermore, the process of money creation, expressed by Ibn Taymiyyah by excessive printing of money, also denounced from the thirteenth century, which implies in particular capital escape, especially good currency. It is during the fourteenth century, with Al Maqrizi (1363-1442), that the theory is explicitly formalized, after it was found that the gold and silver coins disappeared from circulation leaving the market especially with copper coins. "Among the reasons, besides hoarding, he cited commercial reasons, but the real reason he puts forward is the economic and social crisis of the country (Egypt) is the mismanagement of public finances ( ... ) His announcement could not be more clear, the future law of T. Gresham (1519-1579) "Bad money drives out good" However, the analysis of Al-Maqrizi is more detailed than Ibn Taymiyyah's or Gresham "(Verrier, 2004). One of the immediate consequences of excessive money supply is inflation. Ibn Taymiyah did not fail to stress the necessary balance between money supply and trading volume. This balance, if it worsens, involves a loss of purchasing power of money, ie inflation. Faced with this problem, Al Maqrizi who differentiates beforehand between endogenous and exogenous causes of inflation, advocated a return to the gold standard. "Al-Maqrizi offers a first expression of the quantity theory of money by linking prices to the monetary circulation, making him a distant precursor of Jean Bodin (...) Similarly, Al-Tilimsani observed the following three phenomena that he connects perfectly: 1) intense movement of altered money chases good money (gold or silver); 2) the large amount of bad money causes inflation; 3) inflation eventually impoverishes its victims if left unmonitored" (Verrier, 2004). All these directives from economic thinkers Muslims are part of a global movement induction aiming to consolidate the healthy foundations of an Islamic economic system. Indeed, an economic system is never static in time, neither in theory nor in practice, but evolves cumulatively in both theory and practice.

### *3.2.4. Monetary policy*

As part of the consolidation of sound bases of an Islamic economic system, monetary policy is a central and necessary element for the credibility and viability of such a system. Thus, in terms of management of monetary and fiscal policy, the state has a role to play.

First, the coinage is intimately linked to monetary policy, in which the state necessarily plays a role, but which one? As the guarantor of monetary stability, the State must cope with natural cycles of growth and depression of the economy, and has as such tools in an Islamic economic framework too. This may seem surprising when one speaks of an economy without interest, since almost all of the known monetary policy management tools are linked to the interest rate (decrease or increase in interest rates, open market with bills treasury, advances and reversals of short-term liquidity ...). We can identify (following a personal interview with the bank manager Faisal Sudan) many monetary policy management tools as part of an Islamic economy as follows:

- Management of mandatory reserve ratios
- Management of *Musharaka* thresholds of profitability rate cap
- Open market through the purchase / sale of sukuk
- Interest-free loans granted to the IFIs if need
- Limiting the share of Murabaha transactions in the bank's balance sheet
- Limitation of trade margins on murabaha
- Inflow / withdrawal of capital from the IFIs as required through the diminishing Musharaka
- Temporary murabaha transactions with IFIs necessary
- Operations Wakala

### 3.2.5. Fiscal policy

Moreover, fiscal policy is also the prerogative of the State as a second tool in the management of economic policy, through ad hoc utilizations if necessary. "AlMawardi presents a modern vision of public finances, on the brink of the principle of cyclical budget, that is to say the search for a balanced budget over several years, if failing to achieve it on one year" (Verrier, 2004 ). But this tool is not systematic as it would be in welfare capitalism or Marxism for instance. So fiscal policy was deeply studied by many economists of Islam, particularly in terms of its macroeconomic impact and justice that must always accompany it: "Ibn Khaldun made public expenditure an important part of the economic circuit. Due to the weight of its expenses, the state appears as a leading player in the economic and social scene; the author thus emphasizes the key role of the implication of the state into the economy. The money raised by the tax should come back in one form or another, into the economy, that is to say to consumers, in order to maintain private demand and consequently production. If redistribution is insufficient, it causes a slowdown in economic activity, which in turn will reduce tax revenues. In Ibn Khaldun's analysis, the concept of Keynesian multiplier is not very far!" (Verrier, 2004).

## 4. INSTITUTIONS AND ECONOMIC COMPONENTS OF THE ISLAMIC FINANCIAL SYSTEM

Previous developments have shown that the Islamic economic system is based on seven fundamental pillars, four positive and three negative. Thus, next to the prohibition of interest, gambling (maysir) and gharar (uncertainty and major hazards), there is an obligation to share profits and losses, the need to operate within an ethical framework, the linking of any transaction to real assets and operating only in the course of lawful products. All these pillars are controlled in practice by the Sharia supervisory committees sitting in general in the IFIs to ensure compliance of transactions. Once this framework detailed, it is now necessary to identify these different institutions, the most important of them, within the Islamic economic system and that differ from the traditional capitalist system. Indeed, we do not consider very useful to mention elements that are common between the systems, such as the existence of a regulatory state or the existence of companies in the economy. The reason is simple and comes from an Islamic jurisprudential rule about the world of economy and which states that "All transactions and operations are lawful except those prohibited by the laws ", in opposition to the rule on

worship actions that states "Any form of worship is prohibited except those that were instituted by the texts". So let's mention some more details on the main components of the Islamic economic system.

#### 4.1. Zakat

Islam is a religion and not a temporary political model. **Justice** and **solidarity** are therefore intrinsically linked to its global application as an integrated system. Each member of the Muslim society has an interest in the national wealth, and in theory, poverty must be fought to the extreme. This pillar is not like the other four pillars, which are very specific; it has a social impact. Zakat was mentioned dozens of times in the Qur'an along the Salat (prayer). It is mandatory once the *nissab* is reached (85gr of Gold or 595gr of silver in the Hanafi school) which is the minimum threshold below which the individual is not subject to Zakat. As such, the scholars are of the opinion that we must choose the most beneficial to the poor (85 gr Gold is about \$ 3,000, 595 gr of silver is about \$ 400). From the perspective of the beneficiaries, relatives are a priority, then neighbours. From an operational point of view, how do we proceed with the evaluation of this solidarity contribution? The basis of Zakat includes all the Muslim wealth saved for a year. If it exceeds the minimum threshold (*nisaab*), then the Muslim is subject to Zakat. The savings do not include properties not intended for trade, the factors of production in factories (machinery...), transport equipment and everything that is involved in the production process of goods or services. The rate applied, except certain categories of specific agricultural goods, is 2.5% on the plate. This contribution is not linked to tax and the payment of the latter does not exempt from Zakat. It targets the whole wealth, filling a close function of the ideal tax proposed by Piketty in his book "Capital in the 21st century", namely a wealth tax. Many objectives are discussed by the specialists when it comes to analyzing Zakat. According to the first verse of the Koran, it has a role of purifying the soul of the natural selfishness and love of the accumulation of wealth, but it also aims to purify the wealth. Being a worship, non-Muslims are naturally exempt. If they live in a Muslim country, they must contribute to another tax, *jizya*, instead of Zakat. From the receiver's point of view, its main objective is to reduce his need for the others and take him out of poverty, hence there's a preference for sustainable zakat (redirected towards investments that will generate sustainable income to the receiver). It also aims to anchor the spirit of social solidarity, reduce poverty and accelerate overall demand (marginal propensity to consume of the poorest is close to 1 while that of the upper classes is far lower), because it is often injected directly into the economy through consumption. Finally, it helps fighting useless saving and increase investment since the latter is not subject to Zakat (except profits and stock). The wealth thus circulate better in the economy, rent-seeking and inequality are reduced. Note that philosophically, it increases the overall happiness according to some research has shown that individuals who help most others and do more charity are happier<sup>15</sup>.

#### 4.2. Waqf

With a perspective focused on the long term and intergenerational redistribution, not within generations, the Waqf is a powerful tool of social solidarity established by Islam, which remains fundamental in any Islamic economic environment. This tool starts with the initiative of Othman Ibn Affan, a companion of the Prophet who dedicated one of the wells he had in Medina to the Waqf. This method is to set aside the capital so that nobody can claim ownership. It is the usufruct of this capital which is intended to the poor. Thus, the Waqf may involve a firm, real estate, transportation equipment and capital while generating a usufruct in kind or in cash. This tool has benefited the Muslim civilizations from the first centuries to establish the civil society force that needed a certain solidarity and visibility given the economic and political

<sup>15</sup> <http://www.quebecoislibre.org/08/080106-4.htm> (29/8/15)

instability. The Waqf is usually managed today by dedicated institutions paid in consideration for their management services. This tool therefore complements Zakat at the range of institutions dedicated to social solidarity, but unlike charity, it is not compulsory, but is part of the optional alms and charity.

### 4.3. Takaaful

In the section on the main prohibitions in Islamic jurisprudence, we mentioned the prohibition of Gharar, implying a ban outlawing all "commercial insurance" activities. This ban has been the subject of several opinions issued by international councils of jurisprudence confirming that the gharar rule therefore applies to this activity in particular. The experts of Islamic economics nevertheless stressed the importance of assistance and institutionalized solidarity, to reach the conclusion that the principle of solidarity is itself highly recommended, but that the operation and model of conventional insurance was not acceptable. This required a credible alternative, sustainable and institutionalized, which is based on risk sharing, not risk trading (Masri 2001). It is at the intersection of pure solidarity institutions (Zakat and Waqf) and for-profit institutions that Islamic Takaaful model positions, based on the principle of solidarity and mutual insurance, based on donation contracts and not commercial contracts. Indeed, having noted that the gharar concerned only commercial transactions, we can infer that the donations are not affected by it. It is for this reason therefore that the Takaaful is based either on models of donation or on models of Waqf, fairly present in South Africa and Pakistan, for instance. In the 2000s, this product has seen strong growth (Causse-Broquet, 2012). The takaaful originated from a prophetic text endorsing the practice of a tribe called the "Achaari" (not to be confused with the school of thought of achaarite creed) that practiced a kind of primary redistribution. This redistribution was to collect and divide equally the crops in years of scarcity. In the contemporary model Takaaful, one of the main differences with the conventional insurance, beyond the nature of the contract (donation versus sale), is that the surplus generated by the bottom, once all claims are compensated, shall be refunded to contributors largely on the model of some mutual insurances. The Takaaful fund can operate in several ways (mudaraba, Wakala, hybrid...), which are not the subject of our discussion here. The ultimate goal is to allow those who wish to cover, without operate in an illegal environment, to do it. A Takaaful fund cannot for example invest in government bonds, sub-prime or any other illegal substance.

### 4.4. Islamic microfinance

Islamic microfinance institutions have flourished especially out of the Gulf countries, since these countries do not really need microfinance. So there are experiences in Sudan, Indonesia, Malaysia, Egypt and in many other Muslim countries that marked the first success of this experiment. The objective of microfinance institutions is to target a specified class excluded by the IFIs because of their ineligibility to standard conditions that must have a conventional client. With specific tools to filter customer profiles, also very close to the tools of mainstream microfinance institutions operating with interest, these institutions often operate with very close contracts from those used by conventional IFIs, that will be developed hereafter.

### 4.5. Islamic financial institutions

The IFIs are currently the strongest institution of Islamic finance in the world and are one of its two major hubs, alongside the sukuk and capital markets that we will develop in the next section. Appeared in the seventies, these institutions now account for nearly 2% of global finance, with assets under management of around 2000 Billion Dollars<sup>16</sup>. Being present in almost all Muslim countries, they are also implemented in dozens of non-Muslim countries,

<sup>16</sup> <http://www.latribune.fr/economie/international/au-g20-la-turquie-veut-promouvoir-la-finance-islamique-485742.html> (23/9/15)

including Great Britain, Germany ... The objective is to enable IFIs to obtain financing without using the credit Banking, staying within the legal operations and contracts. These contracts fall into two main categories: Participatory contracts and commercial contracts.

#### 4.5.1. *Participatory contracts*

- **The Musharaka**  
Representing the essence of participatory finance, and having many parallels in conventional finance, the Musharaka contract is not in itself an attempt to reinvent the wheel according to experts of Islamic finance, but rather a mean get back to the centre of the economy a transaction that has become marginal beside to the bank credit with all the guarantees it stands on, and all the risk taking it eliminates. The Musharaka contract involves at least two agents bringing capital in a given project and sharing the profits and losses in this project. Contributions may be in kind, in cash or in industry. There are several variations to this contract, such as variable or decreasing Musharaka, which allows a partner to step out from capital by selling shares at their market value. This agreement makes it possible to give an important impetus to the dynamics of investment and entrepreneurship for profiles with no mortgage guarantees, but still holding a promising project. It can also finance consumption through decreasing musharaka. This contract is often assimilated to the "joint venture".
- **The mudaraba**  
This contract operates in a very similar way to the previous, except that one of the operators does not provide capital, as he only brings his work. This formula was used by the prophet himself when he traded on behalf of his wife, Khadija (Chapelliere, 2009). This contract allows the IFIs to raise funds for their clients and act as "mudarib" in the investment or in transactions, or in new mudaraba where they will take this time the role of the investor "rab al maal ". It is particularly assimilated in many aspects to the venture capital. It can be free or restricted to a certain area of activity. If there are losses, the investor bears them within the limits of his contribution, unless there is negligence or cheating of mudarib (Oaidah, 2010). In practice, these participatory contracts weigh only 11% of Islamic finance transactions in 2010 according to the study of nearly 26 IFI worldwide (Chatti, 2010).
- **Muzaraa, musaaqat, mugharassa**  
These contracts are specific to the agricultural field and generally operate with the same rules as the previous, with some nuances.

#### 4.5.2. *Commercial contracts*

- **Salam**  
This contract was already mentioned in the first classification in the sales table. It is highly used in the agricultural world, but its use has been extended to the world of commodities for a long time. Salam consists of an immediate payment of purchase for a full-term delivery of the good (Dharir 1995). The specifications must be very precise to avoid uncertainty. This contract covers only the fungible goods, widely available on the market and easily replaceable in case one of the suppliers is out of stock. It cannot be on coins or rare goods. A parallel Salam can allow funding through IFIs. This agreement resolves some of the problems of working capital and market risk for the buyer and seller, posing a lawful alternative to many products. We note in this regard that very often, the price of Salam is less than the price of a sale of the same good on spot, which is itself lower than the price of forward sales in many cases. Scholars accept the concept of time value, as long as it is attached to a transaction of a real asset, not a monetary transaction (Suwailem, 2000).

- Istisnaa  
This operation is quite similar to the Salam contract, except that it relates to manufactured goods that are non-fungible, and offers more flexibility in terms of payment terms. It is often compared to the SFSC<sup>17</sup> or BOT<sup>18</sup>. Although quite risky and looking like a short sale, it was nevertheless permitted by the Hanafi school, being widely used all over the Muslim world (Masri 2001).
- Ijara  
This contract is comparable to rental of goods and services. It comes in two main forms namely the fixed term tenancy or lease with the possibility of transfer of the property at the end of the rental period, through a separate optional agreement. The Ijara can also be prepaid, provided that the tender specifications are extremely explicit. Of course, this agreement, like those preceding it, will operate within the framework of Islamic economics in the respect of the prohibition of interest (late penalties...) and illicit goods trade.
- Murabaha  
Mainstream contract in practice (Martens, 2001), albeit marginal in the Sharia or even rejected by some companions of the Prophet such as Ibn Umar and Ibn Abbas (Abu Hamdan, 2013, p79), Murabaha was a great success because of the low risk it holds unlike equity products. It is based on a sale then a forward payment, with the possibility to keep the mortgage, making it a very low risk contract and very close in terms of risk level, to the activities of conventional banks. This makes it also one of the properties with the least added value on a macro-economic perspective, except that it provides banking services to a wider segment of the population and that it backs economy to the real trade. It consists of the purchase and resale of a particular property, provided that the second sale does not precede the first purchase at the supplier and that the second client has the option to retract, with the prohibition of all delay penalties. This product was initially an exception, and then rapidly dominated the financial scene (Oaidah, 2010), which caused the indignation of the experts of Islamic economics, who now call for marginalizing it in the benefit of participatory transactions. This product was qualified by the Maliki school Muwasafa if the seller does not own the property, and therefore proscribed (Abu Hamdan, 2013, p79). The Shafi'i school authorizes the transaction if the final buyer is not forced to purchase.

#### 4.6. Islamic financial markets

The development of work on Islamic financial markets has taken place in a second step, after the establishment of the IFIs. Indeed, these markets are not a priority for the general public, but proved to be a necessity for IFIs for liquidity management purposes, in the absence of Islamic central banks. The emergence of Islamic financial markets has been gradual, often in a dual context, that is to say in parallel to conventional markets and under the same legal framework as the latter. "The first Islamic index of global stock exchange listing was the SAMI (Socially Aware Muslim Index), launched in 1998 to represent the tendency of some 500 companies (Siagh 2007)" (Khamlichi 2010). One of the best known is the Dow Jones Islamic Market Index (DJIMI) if we consider non-Muslim countries, and in Muslim countries it's BursaMalaysia. That's how Islamic financial indices evolved. They consist of shares of companies that meet a number of filters (quantitative and qualitative). Shares of companies that operate in an illegal field are excluded (qualitative filter). Likewise for those that are highly leveraged (debt) or have some illicit source income (quantitative filter). Bonds and derivatives are generally excluded from these indices. Furthermore, the product that has been most successful in these markets is the sak (sukuk plural), which represents an alternative to defensive investments with stable income such as bonds. The latter are generally backed securitization of transactions based on

<sup>17</sup> SFSC : Sale in the future state of completion

<sup>18</sup> BOT : Build, operate, transfer

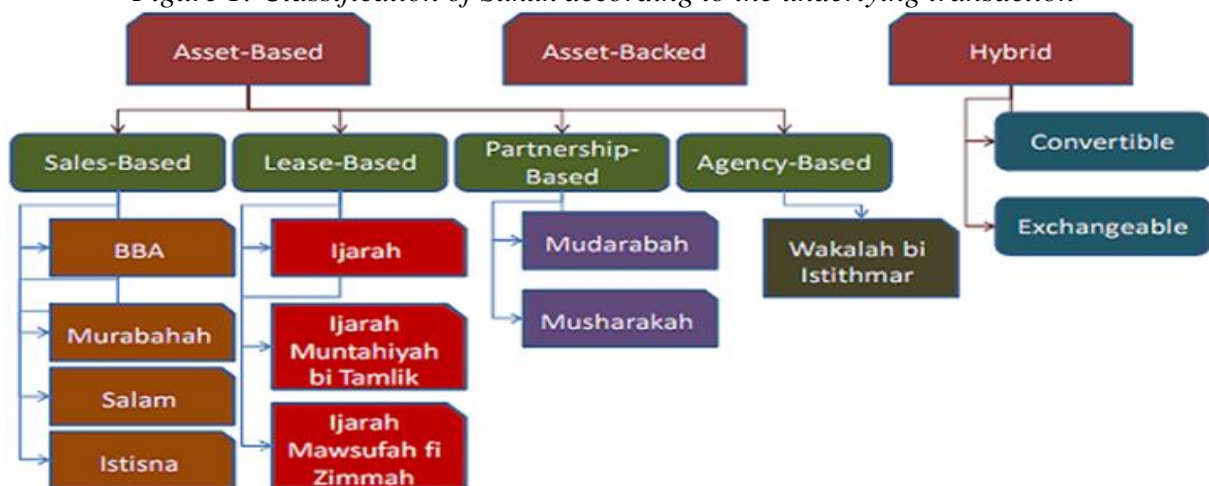
Ijara, Musharaka and most detailed contracts mentioned in the section above, with the exception some that are not negotiable in the secondary market if they represent a debt. They are often treated as asset-backed securities. Islamic financial markets suffer from the divergence in jurisprudential guidelines internationally, which is one of their biggest challenges.

*Table 3: Comparison of Sukuk, Shares and Bonds*

Comparison criteria	Bonds	Sukuk	Shares
<b>Nature</b>	Debt	SPV financing	Property (part of capital)
<b>Flows and revenues</b>	A regular coupon	Regular or variable, depending on the contract	On the G.A decision, depending on the capital
<b>Due date</b>	Limited	Generally limited	Unlimited
<b>Priority in case of liquidation</b>	Priority	Priority	After paying debtors
<b>Risk</b>	Weak in general	Weak in general	Higher
<b>Voting right</b>	No	No	Oui, except special cases

This summary table helps identifying the differences between these three categories of products, the purpose is generally the same for the issuing company: funding. We find that the Sukuk are halfway between bonds and equities. In practice, western analysts view them as "Fixed Income" because practitioners of Islamic finance present them as replicas of bonds, which is an abuse regarding their real objective. These products are currently popular and operate in different ways depending on the underlying transaction. Below is a diagram summarizing the various sukuk, taking two main categories: Sukuk based on actual transactions, and those who take the transaction as a benchmark for the distribution of gains or losses, but are not in terms of property related to the underlying asset (Asset Based). In reality, they are not really consistent with the principles of Islamic finance and are increasingly marginalized.

*Figure 1: Classification of Sukuk according to the underlying transaction*



The classification highlights four main categories. The first involves the debt-based transactions (Salam, BBA...). The second is rent based transactions, with or without purchase option. The third is based on the equity holdings (Musharaka ...). The last is an agency agreement, Wakala. Sukuk are generally quite common in each category. The diagram below is a generic framework for identifying the main steps of sukuk structuring.

Figure 2: Schematic structure of the Sukuk

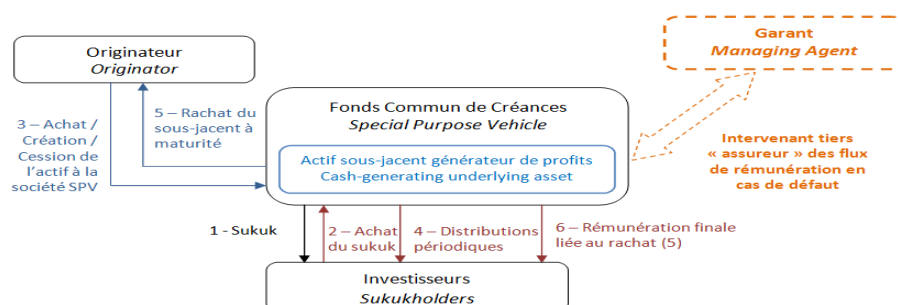
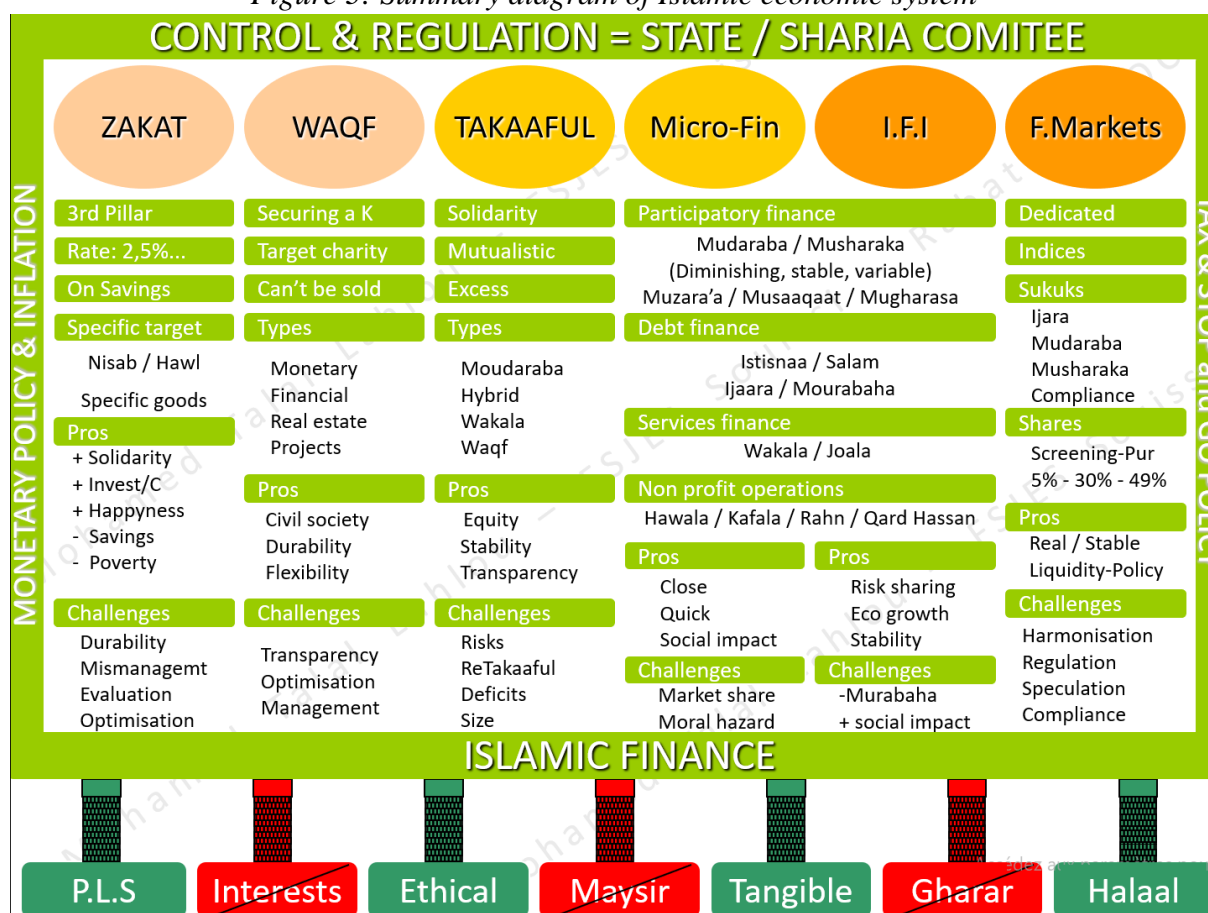


Figure 3: Summary diagram of Islamic economic system



## 5. CONCLUSION

The analysis of the guiding principles has allowed us to draw a number of fundamental laws intrinsic to the Islamic economic system. These laws indicate axioms for most of them anchored and not subject to differences, as they are the borders that can show what is part of Islamic economic system which is not. The Islamic economic system is guided by principles drawn from primary sources of jurisprudence (Qur'an & Hadith) and secondary sources (Ijtihad ...). It is oriented towards the preservation of the five universals, being itself a subsystem of the Islamic social system. Prohibitions are limited as they play the role of system boundaries, alongside positive principles meant to guide the economy in general. This economic system is the fruit of a doctrine that is existing in practice for fourteen centuries of Islamic civilization, with ups and downs. Cycles have also been theorized and analyzed by Ibn Khaldun, a precursor.

The Islamic economic system has processes and methods that vary by region, without violating the basic principles, common to different Islamic economies. Many theories have been developed, including inflation, currency, taxation, the role of government, public policy, cycles and crises... These theories have seldom been included in Western writings which repeated the Schumpeterian statement that humanity has gone through five centuries of vacuum in terms of economic theory from the thirteenth century (Verrier, 2004). One of the reasons that could be advanced to explain this ignorance is that often in the Muslim world, the economy is treated in law books and not in separate treaties. Other reasons have certainly contributed to this ignorance. From a more practical standpoint, the Islamic economic system is rich in modes of financing economy, both public and private, that rely on a set of diversified contracts and meets different socio-economic situations. Many institutions form this economic system, interacting with each other, as the Waqf, Zakat, Takaful, microfinance, the regulator, Islamic financial markets, IFIs... These last are also the most famous subsystems of Islamic economic system, and have a range of mechanisms and very expanded transactions. At the social level, the redistribution takes place sometimes through private channels, sometimes through public channels, fed by a tax system that has inherited a long tradition of expertise. Today, Islamic economics is more a doctrine, certainly closer to practice, just as perfect competition, but not yet a practical system close to perfection in all its components. We have through several Muslim countries “pieces” of Islamic economics, emanations of its subsystems, offering an alternative to the capitalist materialism dominating the economy for almost two centuries. Will these “parts” and this growing Western interest in these subsystems, including that of Islamic finance, be sustainable, will they be an inspiration to enrich the human perception of economy or simply a source of alternative investments to diversify portfolios?

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# THE GROWTH OF THE GIG ECONOMY – BENEFITS AND TREATS TO LABOR

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## ABSTRACT

*The last 10 years have seen the increasing popularity of technological platforms that led to the emergence of a new business model. Its core is the immediate contact between customers ordering particular services and their suppliers, in other words, a quick response to demand coordinated by activities facilitated by the platform. However, it soon turned out that, apart from numerous benefits, the new technological solution also generates threats. In literature, opinions on the benefits and threats resulting from the gig economy are divided. The model has ardent proponents, emphasizing new ways of generating income and flexible working time. Yet, the growth of the gig economy and the increasing body of knowledge and awareness about this part of the economic system have been attracting a growing group of skeptics, recognizing and investigating ever new threats to labor that this segment generates. Therefore, an attempt to weigh up benefits and threats seems justified. It will not lead to the conclusive assessment, but it will give the opportunity to systematize the merits and demerits of the growth of the gig economy, which seems an inevitable process. The article aims to identify the benefits and threats resulting from the growth of the gig economy, a dynamically developing segment of modern economies, with particular emphasis on labor. The analysis will help identify problems that need solving, faced by the state as the entity responsible for creating the institutional framework and adapting it to new developments, but also by employers and employees as the direct participants in the process. The article draws on the current state of knowledge on the subject matter presented in scientific publications and research reports. The analysis results lead to the conclusion that the gig economy generates numerous benefits for consumers, while creating many threats for service providers.*

**Keywords:** Gig economy, Labor, Technological platforms

## 1. INTRODUCTION

The last 10 years have seen the increasing popularity of technological platforms, which has gradually led to the emergence of a new business model. It is based on the immediate contact between customers ordering particular services and their suppliers, in other words, a quick response to demand, which has contributed to the growth of a gig economy. However, apart from numerous benefits, the new technological solutions also generate threats and the evaluation of costs and benefits is not straightforward. In literature, opinions on the benefits and threats resulting from the gig economy are divided. The model has its ardent proponents, emphasizing new ways of generating income and making services available as well as flexible working time. Yet, the growth of the gig economy and the increasing body of knowledge on this part of the economic system have been building a growing group of skeptics. They focus on ever new threats to labor that this segment generates. Therefore, an attempt to weigh up benefits and threats created by the gig economy seems justified. It will not lead to the conclusive assessment, but it will give the opportunity to systematize the merits and demerits of the growth of the gig economy. The article aims to identify the benefits and threats resulting from the growth of the gig economy, a dynamically developing segment of modern economies, with emphasis on labor, in particular the most disadvantaged groups of service providers. The analysis will help identify problems that need solving, faced by the state as the entity responsible for creating the institutional framework and adapting it to new developments, but

also by employers, employees and customers as the direct participants in the process. The article draws on the current state of knowledge on the subject matter presented in scientific publications and research reports.

## **2. THE CHARACTERISTICS OF THE GIG ECONOMY – LITERATURE REVIEW**

Originally, the term gig economy was not related to new technologies. It emerged during the global financial crisis of 2007+, when many people lost their regular employment and – in the absence of a better alternative – started to engage in temporary design-oriented or task-based jobs (Minter, 2017, p. 440). When the economy recovered, many workers continued to pursue the same type of temporary work, as enterprises saw it a source of increasing their competitiveness through flexible adjustment to variable demand and lowering unit production costs (Spreitzer, Cameron, Garret, 2017, p. 476). Thus, the global crisis accelerated the growth of the on-demand economy, the main determinants of which are the speed at which a task is commissioned to a contractor, a flexible response of the supply side and payment exclusively for the completion of individual tasks. As a result, initially the gig economy had a relatively broad context and was associated with the segment of the economy where enterprises engage independent contractors to perform short-term or contractual tasks. The first digital platform, created in 2009 and implemented in 2011, was a breakthrough in the growth of the gig economy as it enabled instantaneous communication between the demand and supply sides, especially in the service sector, and became the foundation of a completely new business model. The current understanding of the gig economy is that it constitutes the segment of the economy where the work of many independent contractors is coordinated according to the actual demand for a given service by means of a specially created digital business platform (Stewart, Stanford, 2017, p. 421). The majority of researchers underline this aspect as the distinctive feature of the gig economy. One of the few comprehensive studies on the subject, conducted in 2017 in the United Kingdom, proposed a working definition of the gig economy as the segment of the economy involving the exchange of labor for money between individuals or companies via digital platforms that actively facilitate matching between providers and customers, on a payment-by-task basis (Broughton, Gloster, Marvell, Green, Langley, Martin, 2018, p. 8; Lepanjuuri, Wishart, Cornic, 2018, p. 12). This segment includes individuals that perform tasks using a communication platform that actively enables gig workers to acquire tasks and determines payment for workers and profits for owners. Workers can provide services in such a way as freelancers or act in the capacity of the self-employed in one-man businesses, while this type of work may be either their main or extra source of income. On the other hand, the gig economy does not include: the unemployed seeking a permanent or temporary job through online job agencies, people who provide online services such as online stores or paid services involving sharing a private flat or a car (e.g. a Blabla car), the self-employed who look for short-term jobs on websites, and teleworkers contacting the employer via the Internet (Lepanjuuri, Wishart, Cornic, 2018, p. 12). The gig economy is also associated with the concept of crowdsourcing, which consists in outsourcing jobs previously traditionally performed within a enterprise and offering them to a broad, undefined group in the form of an open order which can be carried out via digital platforms. Based on the way that job tasks are completed, gig workers can be divided into two groups (Bogenhold, Klinghoffer, Kandutsch, 2017, p. 26; De Stefano, 2016, p. 1; Prassl, 2018, p. 13):

1. those operating online – working in the cloud (crowd work),
2. those operating offline – working on orders placed through mobile applications (work on demand via apps or gig work).

Crowd work is carried out through digital platforms, allowing contact with an unlimited number of organizations and individuals via the Internet, between customers and workers on a global

scale. It often concerns highly qualified specialists, programmers, translators, and designers. They perform translations, transcripts, and other similar activities (Graham, Hjorth, Lehdonvirta, 2017, p. 137). This is how the Upwork platform for high-skilled workers, including digital design and programming, operates (Prassl, 2018, p. 12). The other group includes workers doing traditional jobs, often relatively simple (transport of people, courier services, cleaning, delivery of meals, etc.), receiving orders via mobile applications. This group is becoming dominant in the gig economy, due to low entry barriers and the growing demand for such services. Permission to work in this segment is granted by the acceptance of the rules, the use of own production factors (a car, a bicycle, etc.), and the compliance with the recommendations and control of the platform system. It is anticipated that in the future the provision of services through digital platforms is likely to encompass many other sectors, for example care, education, health care, legal, financial, accounting services (Minter, 2017, p. 441). The extent of freedom of choice that the gig economy affords allows for the identification of four categories of workers: 1) free agents, who chose this segment as the main source of income, 2) casual earners, for whom it is an extra source of income, 3) reluctants, who make a living in the gig economy, but prefer traditional employment, not available to them, 4) financially strapped, who are forced to take extra work to make ends meet. The two first categories dominate (Prassl, 2018, p. 28-29) and they are the most likely to achieve satisfaction from work in the gig economy, because such work is their own choice. The other two groups will be less seen and heard. The gig economy is characterized by significant economies of scale, hence the necessity to obtain adequate turnover. Running a business through a business platform raises the need to attract a large number of users – customers and service providers, which becomes the premise for the expansion of such enterprises. Business in the gig economy is definitely of global nature. If a platform has already been created, expansion on an international scale is relatively easy and inexpensive, as it occurs by popularizing the brand and building trust in it, which results in the minimum effective scale of operations and low average costs. On the other hand, the owner of a platform incurs the risk related to the legal environment of conducting business in various countries and its changes. The nature of enterprises in the gig economy is different from the one of traditional enterprises – business activity involves creating and managing a platform, but an enterprise is not necessarily an exclusively technological firm, because it indirectly monitors the work of service providers, sign on new contractors or deactivate those who do not fulfill their obligations. Platforms, however, do not want to be perceived as employers, attempting to shun the responsibility that traditional enterprises usually accept. They see themselves as marketplaces facilitating transactions between interested partners (Prassl, 2018, pp. 28-29). In the gig economy, traditional enterprises are replaced by platforms, and permanent (long-term) employees by independent contractors or entrepreneurs. The gig economy is characterized by the presence of large groups of on-demand workers: “the crowd” looking for their next “gig”. This still occurs on a relatively small scale, which is difficult to estimate, but it has substantial growth potential. The major driver behind the growth of the gig economy is increasing consumer demand, which is reflected in the expansion of Uber’s operations since the company was founded in 2009. For example, only on 2016 New Year’s Eve, it provided 15 million passenger lifts in around 600 cities in 81 countries. However, the key factor in the growth of the gig economy is the high rate of return (Prassl, 2018, p. 18).

### 3. METHODOLOGY

The overview of benefits and threats related to the growth of the gig economy was based on the critical analysis of the latest publications on the consequences of the expanding gig economy, research reports and case studies, based on which the author conducted logical deduction, cause and effect reasoning, and inference by analogy. Accordingly, benefits and threats were classified by the groups of gig economy participants: service providers and customers who

require these services. Additionally, the division into those working online and those working via apps was taken into account, both for service providers and service consumers.

#### **4. BENEFITS AND THREATS FOR GIG ECONOMY PARTICIPANTS**

Jeremias Prassl (2018, p. 6) writes that “in thinking about the gig economy, it’s crucial that we look beyond platforms’ contractual terms and powerful technology. We will discover fascinating innovations and genuine entrepreneurship opportunities – but we must not let that mislead us into a world of technological exceptionalism. The gig economy’s product, first and foremost, is work”. If so, one should look at the new quality of work as well as the benefits and threats that it generates for gig economy participants. Prassl claims that the gig economy conceals people as employees and transforms them into services. Literally, people become services. At the same time, services offered as part of the gig economy are increasingly gaining in popularity, which stems from multiple benefits derived from the way they can be accessed. Therefore, it is important to offer a comprehensive analysis of the benefits and threats for gig economy participants. Based on reference literature (De Stefano, 2016, p. 1; Donovan, Bradley, Shimabukuro, 2016, p. 2; Drahekoupil, Jepsen, 2017, p. 104; Kuhn, 2016, p. 158; Minter, 2017, p. 440; Prassl, 2018; Stanford, 2017, p. 384; Todoli-Signes, 2017, p. 196-197), an attempt was made at the synthetic presentation of the benefits for gig economy participants. Table 1 shows the benefits by service providers and service users.

*Table following on the next page*

*Table 1: Benefits for gig economy participants (own elaboration)*

<b>Benefits for service providers</b>
<p><b>All service providers:</b></p> <ul style="list-style-type: none"> <li>- flexible working time in terms of the number of working hours and time of day,</li> <li>- low transaction costs,</li> <li>- participation in the so-called platform culture, i.e. formal and informal mechanisms facilitating the provision of services,</li> <li>- relative independence,</li> <li>- relative ease of earning income.</li> </ul> <p><b>Offline workers – via apps:</b></p> <ul style="list-style-type: none"> <li>- ease of launching activity,</li> <li>- access to customers through a well-known application,</li> <li>- no need to conduct marketing activities,</li> <li>- the platform's owner creates standards of operation in the form of detailed rules, which are regularly updated, etc.,</li> <li>- elimination of service providers that violate the standards.</li> </ul> <p><b>Online workers – crowd work:</b></p> <ul style="list-style-type: none"> <li>- the opportunity to work from home or another convenient place (e.g. a coworking center),</li> <li>- access to offers on a global scale – a wide choice,</li> <li>- the opportunity to cooperate with well-known global companies,</li> <li>- access to the latest solutions in a given field,</li> <li>- reduced risk of structural unemployment due to the supranational dimension of the operation,</li> <li>- the inclusion of people excluded from the traditional labor market, e.g. people with disabilities.</li> </ul>
<b>Benefits for service users</b>
<p><b>All service users:</b></p> <ul style="list-style-type: none"> <li>- extended access to new services, which contributes to the quality of life and the overall level of well-being,</li> <li>- the opportunity to order services from any place via a computer or smartphone applications,</li> <li>- competitive prices due to low average operating costs and the global nature of business.</li> </ul> <p><b>Via apps:</b></p> <ul style="list-style-type: none"> <li>- satisfying quality and safety, ensured by the standards and culture of a platform,</li> <li>- easy access to services through convenient, constantly improved and increasingly functional applications, reducing the need to use your own car.</li> </ul> <p><b>Online:</b></p> <ul style="list-style-type: none"> <li>- access to competitive offers of services on a global scale,</li> <li>- the opportunity to read opinions about a service provider, if he has its track record on the platform.</li> </ul>

As can be seen, both service providers and service users reap benefits in the gig economy. This is a prerequisite for the survival and growth of this segment of the economy. The factors that are underlined include the ease and flexibility of conducting activity, the creation of conditions for lower average costs compared to traditional operations, crossing national borders by services provided online, thus increasing the scope of the labor market and building conditions allowing for the elimination of unfair competition. The gig economy, therefore, creates completely new opportunities for its participants, ultimately affecting their well-being and prosperity that they achieve. Social benefits are also important, for example, the reduced number of people driving cars after alcohol consumption and a decrease in the total number of cars on the roads due to transport services available via apps. Research on the gig economy reveals that work in this segment also creates threats to people involved. Table 2 presents the threats in a manner similar to the analysis of the benefits.

*Table following on the next page*

*Table 2: Threats to gig economy participants (own elaboration)*

Threats to service providers
<p><b>All service providers:</b></p> <ul style="list-style-type: none"> <li>- the risk of instability of demand and income,</li> <li>- no guarantee of remuneration – no hourly wage, no minimum wage,</li> <li>- remuneration for the delivery of a specific service (regardless of the time involved),</li> <li>- uneven distribution of responsibilities over time,</li> <li>- huge, limitless pressure from the competition,</li> <li>- a limited number of platforms one can work for,</li> <li>- the need to use own production factors (a computer, a phone, a bicycle, a car, etc.),</li> <li>- the need to provide maintenance, repairs, upgrades of equipment at one's own expense,</li> <li>- the self-sufficient organization of a workplace,</li> <li>- the need to prepare for work and raise qualifications at one's own expense,</li> <li>- no protection against discrimination,</li> <li>- social security on the side of the worker, which usually means it is not provided for,</li> <li>- exposure to subjectively unfair ratings on the quality of the service, as performance appraisal is delegated to the customer, who may issue an opinion based on his mood, personality, etc .,</li> <li>- limited or no possibility of establishing trade unions to protect the interests of service providers.</li> </ul> <p><b>Working online – crowd work:</b></p> <ul style="list-style-type: none"> <li>- exposure to global competition,</li> <li>- lack of protection regarding remuneration and its amount.</li> </ul> <p><b>Via apps:</b></p> <ul style="list-style-type: none"> <li>- no possibility of showing initiative and entrepreneurial thinking by independent service providers, due to the rules of the application system and the control over service providers,</li> <li>- exposure to direct contact with an unknown customer,</li> <li>- exposure to undeserved deactivation in the event of an unfair, low customer rating.</li> </ul>
Threats to service users
<p><b>All service users:</b></p> <ul style="list-style-type: none"> <li>- exposure to poor quality of service or danger in the case of contractors who have no rating yet,</li> <li>- limited possibility of pursuing claims.</li> </ul> <p><b>Customers of service providers working online:</b></p> <ul style="list-style-type: none"> <li>- exposure to untimely performance of the service or abandoning the task,</li> <li>- the risk of low quality services due to lack of control and high standards,</li> <li>- limited possibility of pursuing claims,</li> <li>- difficulties in dealing with the “crowd” of service providers.</li> </ul> <p><b>Customers of service providers working via apps:</b></p> <ul style="list-style-type: none"> <li>- exposure to direct contact with a service provider performing his work in an inadequate manner.</li> </ul>

The general analysis of the threats reveals that they are more numerous on the part of gig workers. They concern the most important aspects of work-related activity: the amount and guarantee of income from work, working time, social security, costs of business activity, contacts with customers, and many others. Their characteristic feature is also the frequent lack of awareness and knowledge of the threats by service providers who learn of the negative

aspects of such work only in practice, from their own experience. It should also be assumed that the list is open, as the scope of services provided in the gig economy is increasing and new threats may emerge.

## 5. CONCLUSION

The short history of the gig economy proves that this is a segment with huge potential, so the benefits and threats that emerge as a result of its growth are worth exploring. The overview of the benefits and threats for gig economy participants leads to two basic conclusions: 1) the benefits are achieved both by service providers (at least their dominant group) and service users; moreover, the benefits appear to be relatively balanced, which attests to the good prospect of the segment; 2) the threats mainly affect service providers. This leads to the assumption that they will bear the negative consequences of further expansion of the gig economy. Therefore, the issues relating to the gig economy require continuous observation and in-depth research.

The business model of the gig economy, unlike more traditional models adopted in other segments of the economy, creates threats affecting service providers as they are deprived of labor law coverage, in the absence of other regulations concerning gig work. This is the source of competitive advantage of the gig economy, in which the average costs of operations are lower, hence it must be expected that the problem will persist or even deepen. The positive image of innovation and its widespread acceptance as a desired phenomenon that often defies existing regulations exacerbate the situation further. The national nature of labor law hinders the development of universal solutions regarding the protection of gig workers. It seems that international organizations, especially the International Labor Organization, have to become involved in order to establish a new legal framework for work in the gig economy. This is necessary to ensure the sustainable growth of this high-potential segment of the economy.

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